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ABSTRACT

This study was intended to identify unmet telecommunications education needs of residents in south central, southeast, and southwest Los Angeles, together with the border communities in the cities of Inglewood and South Gate; identify the level of sophistication of the average consumer regarding the usefulness or need of specific telecommunications products and services; identify consumers' level of understanding and concerns with telecommunications issues and trends; and present recommendations to consumer educators. The investigation included reviews of the literature on telecommunications and the marketplace and on needs assessment, as well as a survey of a sample of 1,494 residents of these low and middle income areas. Data were analyzed by means of frequency distribution at a 0.05 level of significance. Results indicated that: (1) many consumers are confused by the new telecommunications marketplace; (2) for many, the phrase "phone company" represents all telecommunications services; (3) a number of telecommunications consumers do not use the enhanced services they have purchased; (4) average monthly bills of the target population are astronomical given the income levels and geographic location of this population; (5) only 62% of respondents read their bills; (6) less than half the respondents read the telephone company's messages to consumers in their bill inserts; (7) telecommunication services for individuals with special needs are not effectively publicized; (8) terminology such as "fiber optics" is foreign to a majority of the consumers; (9) some respondents view the possibility of the caller I.D. feature as a deterrent to obscene and/or anonymous calls; and (10) they consider the public telephone system to be unreliable and inadequate. Suggested recommendations include provision of touch tone telephones at no cost to consumers; follow-up level of use studies; increased dissemination of information about changes in services, rate increases, and special services; and periodic checks of consumer bills for accuracy. Appendices contain the survey instrument and census data. (27 references; 61 tables) (DB)

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A TELECOMMUNICATIONS EDUCATION NEEDS ASSESSMENT STUDY OF RESIDENTS IN SOUTH CENTRAL, SOUTH EAST AND SOUTH WEST LOS ANGELES

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FALL 1991

written by

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A TELECOMMUNICATIONS EDUCATION NEEDS ASSESSMENT STUDY OF RESIDENTS IN SOUTH CENTRAL, SOUTH EAST AND SOUTH WEST LOS ANGELES

FALL 1991

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EXECUTIVE SUMMARY

A Telecommunications Education Needs Assessment Study of Residents in South Central, South East, South West Los Angeles with the border communities in the cities of Inglewood and South Gate.

by

Dr. Regene L. Mitchell

Statement of the Problem

In an era where the Telecommunications industry is undergoing rapid change, consumers are in dire need of telecommunications education in order to make informed decisions in purchasing telecommunications products and services. This is particularly true in low and moderate income community—in the geographic area mentioned above—where there seems to be mass confusion and a tremendous information void.

Purposes of the Study

The study is concerned with identifying and meeting critical telecommunications education needs of a particular community. More specifically it is intended to:

1) identify unmet telecommunication education needs of residents in South Central, South East, South West Los Angeles and border communities in the cities of Inglewood and South Gate;

2) identify the level of sophistication of the average consumer—in the target areas—regarding usefulness or need of specific telecommunications products and services they now have or hope to acquire;

3) identify the level of understanding and concerns with telecommunications issues and trends; and

4) present recommendations to consumer educators interested telecommunications product and service providers.

Procedures

Methods: The study utilized three methods of investigation:

1) A review of literature related to the telecommunications marketplace;
2) a review of literature related to needs assessment; and
3) a questionnaire survey of the targetpopulation.

Review of the telecommunications marketplace including telecommunications of YESTERDAY, TODAY, AND TOMORROW.

The major aspects of needs assessment identified through the literature review were:

(1) rationale,
(2) concepts,
(3) Environmental Scan, and
(4) utilization of information obtained through needs assessment.

A sample of 1494 residents in South Central, South East, and South West Los Angeles plus the bordering cities of Inglewood and South Gate were surveyed to determine their knowledge of and satisfaction with telecommunications services.

Thie data was analyzed by means of frequency distribution at an 0.05 level of significance.

Conclusions

Some of the major conclusions drawn from the findings of this study were:

1) Many consumers do not see the personal benefits of divestiture and are confused by the new telecommunications marketplace. There is a lack of understanding as to the "whys and hows" of the Ma Bell breakup—and do not know—in the present telecommunications environment, who is responsible for what!

2) For many, the phrase -phone company- is still catch-all for all telecommunications services: Basic Service, Special Services, Equipment, Repairs, and Long Distance Services.

3) A considerable number of telecommunications consumers do not use some of the enhanced services they have purchased. Many are unaware of certain services that were included in a Commstar package they purchased.

4) Average monthly bills of the target population are astronomical, considering the geographic location of this study, and the number of families with average annual incomes below $15,000.

5) Consumers — in this study—are very concerned by the number of billing errors they experience. Only 62% all of respondents read their bills.

6) The major form of communications to consumers used by the telephone companies is bill inserts, yet, less than half of those completing this survey read bill inserts. This leaves a majority of remaining telecommunications consumers in an information void.

7) Telecommunications services for individual with special needs - such as TDD, CRS, and Talking Yellow Pages—are not widely (or effectively) publicized.

8) Terminology such as Fiber Optics—the driving force of the of the information age—is foreign to a vast majority of consumers.

9) Some respondents view the possibility of the caller I.D. feature as a deterrent to obscene and/or anonymous calls.

10) The public telephone system is considered unreliable and inadequate in the geographic location of this study.

CHAPTER I

INTRODUCTION

California, an ethnic microcosm, has entered the fringes of the information age with symptoms of "cognitive overload". Consumers are bombarded with a cornucopia of choices of telecommunications products and services with limited—and in some cases—non-existent consumer information about how such products and services might impact the quality of their lives.

Statement of the Problem

As a result of the 1984 divestiture of the telecommunications industry (The Breakup of Ma Bell), consumers have been inundated with a multiplicity of available products and services. These choices, in deregulation terms, should serve to stimulate competition, thus drive down the prices of telecommunications products and services. Instead, boundless choices coupled with sparse information have only served to overwhelm consumers. Cognitive overload and confusion are the direct outgrowth of rapidly growing telecommunications technology and inadequate consumer education.

Before 1984 consumers depended on AT & T to provide their long distance services, while local phone companies such as Pacific Telephone and General Telephone companies, under regulation of the Public Utilities Commission, provided dial tones, repairs, and selected special services, i.e. call forwarding.

Since 1984, local phone companies have focused a great deal of their energies on developing and marketing a variety of services at assembly line rate, (conference calling feature, call waiting, 976, telemarketing, etc.) Additionally, dozens of companies are competing in the market place to provide long distance service, customer owned coin operated phones, telephone repair services, and numerous other products and services.

In this environment of change and growth, consumers are finding it difficult to make informed, rational choices for products and services.

While the legislature (Moore Act) and consumer activists worked to insure that basic telephone service is available and affordable to all households in the state of California, many consumers were being encouraged to purchase services that place their basic service in jeopardy. In 1988 CPUC ruled that unfair sales practices and misunderstanding regarding the cost and usefulness of telecommunications services and products could very well cost many customers with limited funds access to basic services.

In recent years, termination of basic telephone service in many instances is likely to be directly related to financial over-extension for non-essential, and often underutilized services. i.e. conference calling, call forwarding, etc.

Purpose of the Study

The present study is concerned with identifying and meeting critical telecommunications education needs of a particular community. More specifically, it is intended to:

1) identify the level of information received and understood by the average consumer, in South Central, South East, and South West Los Angeles regarding telecommunications choices;

2) identify the level of sophistication of the average consumer, in the target area, regarding usefulness or need of specific telecommunications services they now have or hope to acquire;

3) identify specific educational needs of telecommunications consumers, based upon findings in the study;

4) present recommendations appropriate for the type of consumer education program to be implemented by consumer educators and interested telecommunications products and service providers.

5) encourage telecommunications consumers to "take stock" of the types of products and services that they now have and plan to purchase, in terms of economic feasibility and usefulness.

Importance of the Study

Too often products and services are presented to the consuming public with little consideration given to need and improvement of the quality of lives. As a matter of fact, it seems that in many cases "need is generated". In such cases, industries rely on some consumers tendencies toward conspicuous consumption and stereotypes (of various ethnic groups and socioeconomic levels) to peddle products which may be financial burdens and not necessarily useful.

Discussions with consumers before the advent of this study, revealed several variations of the following Case In Point:

> Some consumers were unaware of services that they had purchased in a package. "What is Commstar?" "I have it but I do not know what it means." "I did not know that I had conference calling for months!" "I still do not know how to use some of the features I have."

The current telecommunications market is a maze of confusion for many consumers. In an environment of drastic change, there is competition frenzy among long distance companies, and an assembly-line fervor of local telephone companies to develop and market products and services. More than ever the average consumer is in dire need of education regarding their choices.

The practice of Needs Assessment and Environmental Scanning is used—to a large extent —by the education community with little attention given to market research (what will sell). On the other hand, business focuses primarily on market research (what will sell) with little regard for the usefulness of the products and services offered to the consuming public. In both cases, absent is the issue of informed, decision-making by consumers.

Method of the Study

The method of study used here is the descriptive method as defined by Gay:

> Descriptive research involves collecting data in order to test hypotheses or answer questions concerning the current status of the subject of the study. A descriptive study determines and reports the way things are...Descriptive data are typically collected through questionnaire survey and interview or observation. [1]

To apply this kind of research to an investigation of telecommunications consumers in the Southern part of Los Angeles, the following methods were used: (1) a review of literature, and (2) survey questionnaires.

Review of Literature

A brief overview of Telecommunications yesterday, today and tomorrow is provided in Chapter II. Additionally, and importantly, a comprehensive review of the literature on needs assessment which draws upon a variety of sources, including computer-researched papers from Educational Resources Information Center (ERIC) and the Library of Congress; Education Journals; Handbooks such as "Conducting Community Impact Studies", and Computer Encyclopedia Sources, can be found in Chapter V.

Rationale

In order to avoid information and communications voids, business and education communities often utilize conduct survey.

Survey questionnaires, filled in by respondents have advantages and disadvantages. As Kidder noted, surveys have the advantage, especially for large groups of respondents, of being less expensive, of eliminating interview bias, and of affording anonymity. [2] The major disadvantage of the survey method—the possibility of a low response rate because of failure to return

mailed questionnaires—was circumvented in this study because more than ninety percent of the surveys were distributed and collected at community agencies and in community meetings.

Construction of Questionnaires

The questionnaire items were so worded as to elicit information helpful in meeting the purposes of this study.

Armijo and his associates have made suggestions on the wording of such items:

> Keep items as short as possible;
> Language should be simple, clear, and straightforward;
>
> Whenever possible, simple sentences should be used. If a questionnaire item offers alternative responses to be checked by the respondent, the set of responses should include all possible answers and make them distinct from one another. In other words, the set of responses should be exhaustive and mutually exclusive;
>
> Double-barreled items that merely ask two questions should be avoided. Babbie (1973) suggests that whenever the word "and" appears in a questionnaire item, the item should be reviewed for unity. [3]

There are two basic types of questionnaire items: open-ended items, to which the respondent supplies his/her own answers; and closed-ended items, whose possible answers are supplied by the researcher. Closed-ended items have the advantage of (1) being more uniformly interpreted by respondents; (2) eliciting easily tabulated responses; (3) avoiding respondent verbosity; (4) eliminating problems of vocabulary and definition; and (5) permitting more questions. [4]

The following is an example of a closed-ended item used on the questionnaire in this study. (Circle Response)

"If you wanted information regarding phone company service, which is the best source for you? TV; RADIO; BILL INSERT; FLYER; LOCAL NEWSPAPER; OTHER."

Open-ended items gave respondents the opportunity to comment on any issue or topic or concern to them, with opportunity for suggestions.

In constructing questionnaires, construct and content validity were important considerations. **Construct validity** is defined by Kidder (1981) as follows: "an evaluation of the extent to which an instrument measures the theoretical construct the investigator wishes to measure. [5] Construct validity was accomplished in the following ways: 1) Review of literature regarding readability of questionnaires: 2) Review of literature regarding comprehension level of the average survey respondent; 3) discussion with community residents/leaders regarding in which the respondents were asked to comment (verbally) on the readability and clarity of each item; and 4) by having several discussions with statisticians and researchers who had expertise on questionnaire design to determine if the items were clear.

The content validity of the questionnaires was accomplished in four ways, by: 1) using a broad range of items, both open-and closed-ended, to allow for freedom of response and to make the coverage of the questionnaires as comprehensive as possible; [6] 2) extrapolating information for readings and telecommuni- cations experiences: 3) having several conferences with statisticians and researchers to get their input about the content of the questionnaire; and 4) by conducting a pilot study in which respondents were asked to comment on the completeness and range of information that might result from the data collected.

Fifteen hundred English surveys and five hundred Spanish surveys were printed after six drafts and minor changes. It should be noted that although only five hundred surveys were printed in Spanish, some bilingual respondents completed the English version.

Selection of Respondents

The assessment project was designed primarily for low and moderate income residents in Los Angeles, more specifically. South East; South Central; South West Los Angeles and some border areas in the cities of Inglewood and South Gate. This represents a 10.8 square mile radius with the following borders: Adams Boulevard (North) to El Segundo Boulevard (South) and La Brea/Hawthorne Boulevard (West) to Long Beach Boulevard (East).

The respondents were, primarily, members of Headstarts families', Senior Citizens, Housing project residents, Church members and individuals using various social services agencies. Approximately ten percent of the surveys were completed by individuals who worked in the target area but may or may not live in the area.

The Conduct of Survey

The surveys were distributed and collected over a four month period.

Six community consultants distributed and collected ninety percent of the surveys at Headstart sites, community meetings, Senior Citizen centers, Housing Projects, Health Services Centers and Churches. This represents approximately sixteen hundred completed surveys. One hundred-fifty surveys were mailed to several community activists who distributed and collected and returned one hundred and ten completed surveys. Some surveys were received after the deadline, and regretfully not included in the data entry process.

The community consultants that distributing the majority of the surveys, reported that the survey completion time ranged from 20 to 30 minutes. Most of the surveys were distributed and collected in groups situations before or after meeting planned for other purposes.

Analysis of Data

The frequency of responses and percentages for each item was counted in categories for the close-ended responses.

Categories were established for open-ended responses according to most prevalent concerns and suggestions. Examples of unique concerns are presented in the text of the Findings Chapter III.

Scope and Limitations

Because this study is directed specifically to the implementation of a telecommunications needs assessment in South East, South Central, and South West Los Angeles more of the literature reviewed is related to community needs assessment and telecommunications issue and trends.

The instrument developed for this study may not be relevant, without some revision, for use by other communities. However, the implication stated in the findings chapter of this study, may be useful in drawing analogies between the community in this study and other similar communities.

All of the respondents were Pacific Bell customers, with the possible exception of a few respondents that work in the target area but live in a GTE area i.e. Santa Monica. The long distance services used by the respondents covered a larger number of companies.

In order to avoid overwhelming the respondents with a lengthy survey, issue of long distance service was not directly addressed in the closed-ended segment of the survey. Long distance concerns and suggestion were stated in the open-ended section of the survey.

Factors such as level of education, professional and occupational status were not addressed on the survey because the target population was primarily low/moderate income families.

Assumptions

The following are examples of assumptions made in the planning and development of this study:

I) There is a positive correlation between socio-economic status and knowledge of the current telecommunications marketplace trends.

2) Ma Bell break-up is not completely understood by the general population, and even less by low-income community.

3) The average resident in the target area would like to know/understand more about current telecommunication issues, products, and services.

Organization of the Study

This chapter has reported on the purposes and the importance of the study, described its methodology, and noted the scope and limitations of the study. Chapters II provides an overview of telecommunications marketplace.

The finding of the study reported in Chapter III discusses responses to both open-ended and closed. The chapter opens with a brief profile of the target population and samples of the survey distributors experiences. Chapter IV provides Summary, Conclusions, Recommendation to be presented to those interested in providing relevant telecommunication education to similar audiences. Chapter V reviews literature on needs assessment important to the study.

List of Footnotes

1) L. R. Gay, Educational Resources: *Competencies for Analysis and Application.* 2nd ed. (Columbus, Ohio; Charles E. Merrill Publishing Co., 1981), p.12

2) Louise H. Kidder, *Research Methods in Social Relations,* 4th ed. (New York: Holt, Rinehart, and Winston), p. 148

3) Frank Armijo, Sidney Micek, and Edward M. Cooper, *Conducting Community-Impact Studies: A Handbook for Community Colleges.* (Boulder, Colorado: National Center for Higher Education Management Systems, 1978)

4) Ibid.

5) Kidder, p. 133

6) Kidder, p. 168

CHAPTER II

TELECOMMUNICATION: A BRIEF OVERVIEW

In this chapter the literature relevant to this study is reviewed under three headings. Telecommunication Today; Yesterday; and Tomorrow.

An answer to the following questions was sought. 1) Is the present telecommunications marketplace "user friendly"?; 2) Is the telecommunications heading toward an information rich/ information poor society?; and 3) Are consumers maximizing their telecommunications dollars?

Telecommunications: Yesterday

American Telephone and Telegraph Company (AT&T) was formed in Boston on July 8, 1877. AT&T moved to New York in 1885 for financial reasons and reorganized as AT&T, with the Bell System as one of its subsidaries. [1]

Telecommunications Education Trust (TET) reported that:

> "for fifty years, from 1934 to 1984, American telephone consumers generally bought telephone services for their homes and businesses from regulated utilitiy companies whose rates and services were rigidly set and monitored by state and federal government. A common goal for the phone companies and government regulatory agencies was universal service...access to reliable telephone communications for all Americans at a reasonable cost." [2]

Telecommunication: Today

As a result of the 1984 "break-up" of the Bell System, local companies became autonomous. However, some restrictions have been imposed on local companies to avoid anti-trust violations.

Not all of the decisions, made by the Federal Courts during the dismantling of the Bell system, are beneficial to consumers. In some cases, services which were previously provided at no charge to consumers, are no longer provided without cost. Case-in-Point: Inside wire. Consumers are no longer able to call the local telephone company and simply say "my telephone is not working, please repair it". That statement placed the "ball in the telephone company's court". Since 1984, the telephone companies retort is "Check your telphone because if the problem is in the instrument (which can be purchased from any source) and we come on a repair call, you will be charged the current service call charge. If you do not have inside wire insurance and there is a problem with the wiring within the walls of your home, you may be charged for such repairs." This places the "ball in the consumer's court".

The idea of the ruling was to stimulate competion for telephone repair. Independent repair services charge "what the market will bear". In this case, the consumer "benefit" in the competitive price market moved from **not paying** to **paying !**

Additionally, and most importantly for the purposes of this report, the local telephone companies have increased dramatically the products and services offered to consumers. So many choices with inadequate information and decision-making skills is a perfect formula for mass confusion.

According to Pacific Bell,

> "The Court decision permits expansion of the information services market. Prior to the Order, Pacific Bell's participation in information services was basically limited to minimal transport. That left the potential value of informations services for the average consumer or small business customer. It meant small niche markets. We liken this to shopping at a "boutique" where both the product selection and customer base are narrow rather than broad.

> An alternative, and one we plan to help develop, is much like a shopping mall where a diversity of shoppers are offered a variety of products by a number of competinginformation merchants."3

This new telecommunications marketplace is providing a number of beneficial services to consumers and has increased business communication proficiency. A major problem is that uninformed decisions by vulnerable consumers results in the purchase of products and services which are not only underutilized. Further the continuance of their basic telephone service is threatened due to financial overextension.

Enhanced services such as Call Waiting, Call Forwarding, and Conference Calling are widely used by low-income families, yet, few are aware of special services for the disabled, or "a device...developed that can jolt a fibrillating heart back to normal over the telephone". 4

TET (1989) posed questions raised in the new competitive telecommunications marketplace:

- How much of the cost of upgrading and expanding the system to offer enhanced services statewide, even to remote areas, should be borne by those served versus the general body of consumers?

- What role should government take in providing services and information through the telephone network?

- What are privacy implications of these changes in the telephone system for individuals and organizations?

- What forms of regulation are optional for today's changing telecommunications environment? [5]

Telecommunications: Tomorrow

Undeniably, technological advances in the field have and will improve the quality of life for many consumer. The following is a partial list of potential consumer benefits of telecommunications technology as cited in the Intelligent Network Report sponsored by Pacific Bell:

- Medical monitoring of patients at home, with output transmitted to doctor's offices, hospitals, or clinic;

- Medical "help buttons" which summon assistance automatically when patients wish to call;

- Systems to monitor home security and transmit alarms when necessary;

- Meter-reading and emergency control of utilities;

- Enhanced 911 systems which could incorporate a household database concerning medical problems or residents, most efficient route to the home, a diagram of the home, etc.;

- Access to databases for education, business, professional research, or personal interest;

- Special services to improve access for the disabled and for those not fluent in English;

- Access to "job banks" and similar employment information;

- Prospects of automatic language translation. [6]

Some of these services may also be fertile ground for unscrupulous salesperson and or fraudulent business practices.

According to Lomax,

> "Technology has now and will continue to have widespread impacts on all aspects of society. He further states: People will need to have a sense of being able to control their own orientation and to understand how advancing technologies offer personal advantages to their own real-life situations. Programs that offer coping strategies or opportunities to display skills and re-

late them or apply them to expanding technological knowledge will be needed. [7]

Many consumers that have been able to become a part of the mainstream of the information age are finding it difficult to cope with the new multifaceted communications environment. The coping problems are compounded for the vulnerable populations.

— The following is a partial list of "National Planning Assumptions" on Technology from the World Future Society's Sixth General Assembly reported by Catonville. (1989)

— A growing movement to maintain a balance between "high tech" and the human element, including the development of a religious humanistic emphasis on wholeness;

— A rapid "turn-over" rate in new technologies is likely to continue;

— Video, audio, and data transmission will increasingly be integrated into a single system;

— The telephone will increasingly become the gateway to sophisticated communications services;

— Concern about individual privacy will increase as more data is collected electronically;

— Information overload, and the degradation of the quality of information will become increasing issues;

— Electronic gadgetry will quicken the pace of American life;

— The home will be come more central as an institution;..... [8]

In contrast, the Economic Assumptions addressed at the same assembly reveals the problems which may result in an informations rich and information poor society if the there is no intervention.

A partial list of the Economic Assumptions from the above forecast study includes the following:

— The consumer economy will be modified to meet the values and tastes of an again society;

— In the communications industries, telecommunications, cable television and direct mail will expand, and employment will grow in higher level jobs;

— Over all income growth rates in the 1990's will be less than in the 1980's;

— Income inequality will increase among families with two-income households gaining and single-parent households falling behind;

— The number of single-parent households who are poor are likely to increase;

— Consumer spending will increase only modestly in the 1990's, except among upper-income consumers over the age 35, where it will increase substantially;

— The national poverty rate is likely to increase;

— The growth of an urban, minority underclass, whose situation is not improved by general economic growth, will continue;..... [9]

SUMMARY:

Yesterday

Fifty years ago the telephone companies were concerned with providing access to basic service to consumers in all geographic locations—metropolitan and rural area.

Less than a decade ago AT&T was considered Ma Bell while local telephone companies were considered "baby bells". In 1984 the local bell companies became more autonomous.

Today

The question raised in this section is "Is the present telecommunications marketplace user friendly"?

Clearly there is a need for improved telecommunications education. Presently, consumers are overwhelmed with telecommunications products and services offered without sufficient knowledge about how such products and services are compatible with their individual lifestyles. It is reasonable to assume that the telecommunication industry would maximize the advertising dollars while providing useful information to consumers if telecommunications education needs are identified and met.

Tomorrow

Education, access, and affordability are important component for closing the gap between the information rich and information poor.

"The future belongs to people who are able to master our expanding technology. Competing in today's technological society requires advanced skills at a time when the illiteracy rate in the United States is increasing". [10]

List of Footnotes

1) Henry M. Boetlinger, *The Telephone Book* Academic American Encyclopedia. 1983

2) Telecommunication Education Trust. (TET) Background Report. 1989.

3) Pacific Bell' s Response to the "Intelligent Network "Report. 1988, p. 4

4) Ibid. p. 6

5) TET. p.2

6) Pacific Bell. p.29

7) Lynn Lomax, "Environmental Scanning Project: A Dimentional Aspect of Needs Assessment in the Strategic Planning Process" (Lane Community College, Eugene , Oregon. 1987.) p.28

8) Catonville Community College, MD. "External Environmental Scan and Forecast", ED 309 817, 1989.

9) Ibid

10) "Losing the War of Letters". Time, May 5, 1986.

CHAPTER III

FINDINGS

The purposes of this chapter are: a) to provide a demographic description of the survey respondents; b) to report on the frequency and significance of the responses to twenty-seven closed-ended questions and two open-ended questions on the survey; c) to make observations regarding respondents satisfaction or dissatisfaction with specific telecommunications products and services, and d) to report on the level or use and knowledge of telecommunications products and services.

The instrument used for the survey was designed to elicit relevant information and respondents views while assuring that their anonymity would not be jeopardized. (See appendix A. for a copy of the survey).

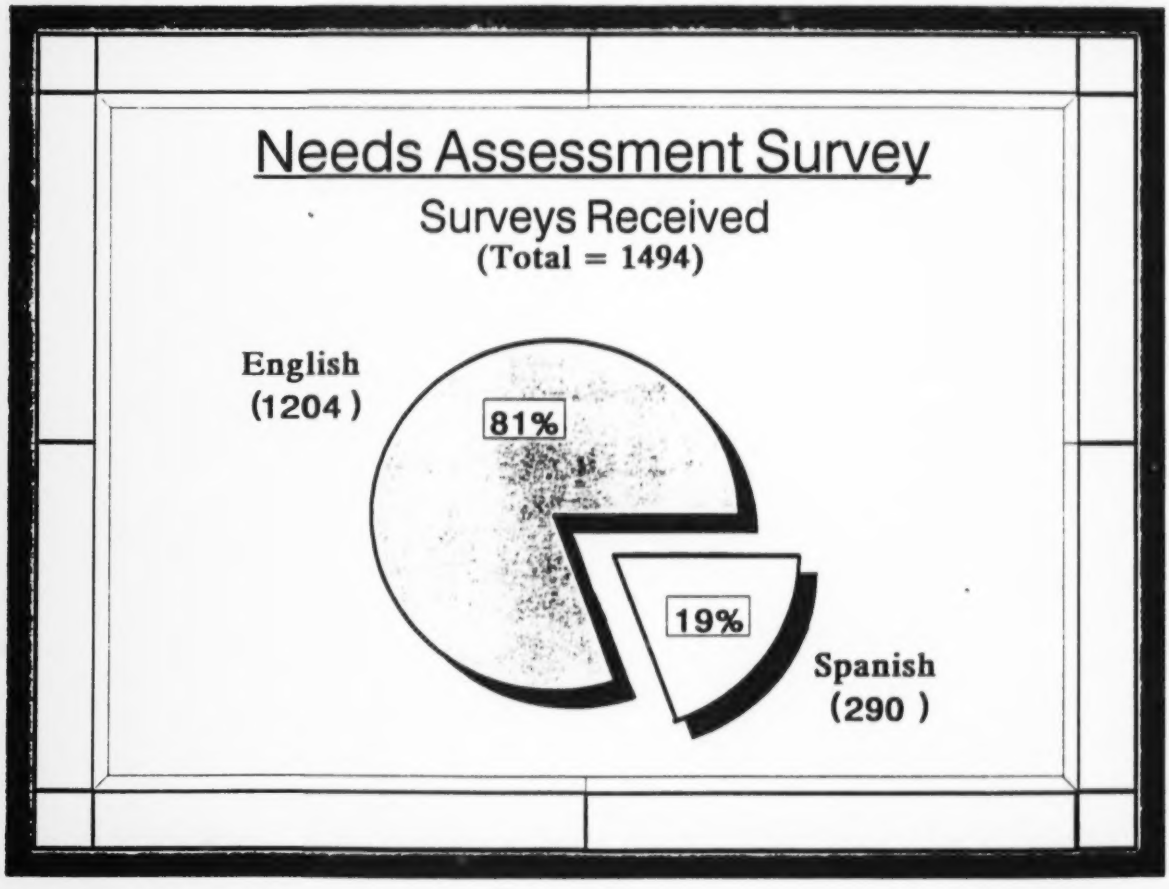
The analysis of data was performed at the 0.05 level of significance. English and Spanish surveys were treated separately. The tables note frequency and percentages of responses in various categories.

Profile /Demographics

As noted earlier, the primary target population was low-to moderation income residents in the South Central, South East and South West area of Los Angeles with border areas in the cities of Inglewood and Southgate.

After lengthy discussions with community consultants, the decision to use the following as major distribution points was made in order to reach the above mentioned prototype of the target population: Headstart Parent and Staff meetings, PTA meetings, Senior Citizen Centers and meetings, Community Health Center, Community Organization meetings; Housing Projects and individuals living in the target area.

Table 1



The completed surveys (approximately seventeen hundred) were reviewed by the project director, data entry specialist, and the statistician. Nearly two hundred completed surveys were not included in the study because the above mentioned "team" believed them to be statistically unsound.

Fourteen hundred and ninety-four surveys were used in the datas entry/analysis process, as shown in Table #1. Twelve hundred four English surveys and two hundred ninety Spanish surveys were used in the study. Some bilingual Hispanics completed English surveys.

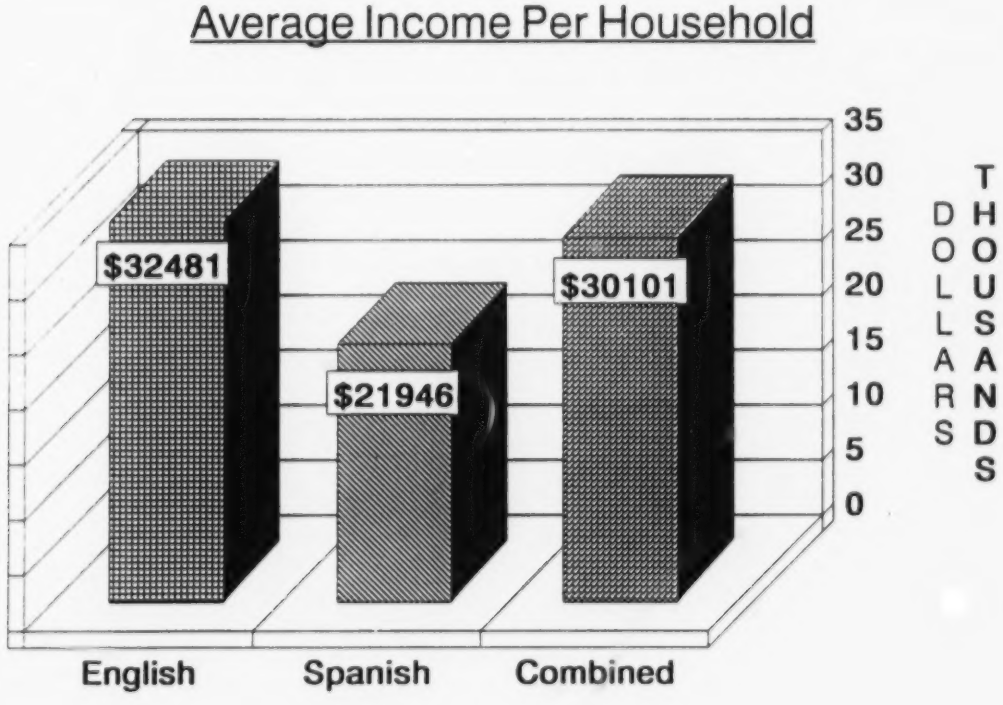
INCOME

Approximately ten percent of the surveys were mailed to community agency directors and heads of organizations who interact with middle -income residents in the target community. These completed surveys could account for the "high-end" on the income chart. (Table # 2). More specifically, six hundred and sixty-one respondents completing the English surveys, and one-hundred and fifty-seven completing the Spanish surveys, had annual family incomes under $15,000. Two hundred ninety-one and fifty-one English and Spanish survey respondents respectively, had annual family incomes over $30,000. Eleven hundred fifty-two of all respondents had annual family incomes under $30,000 (77%).

For a small number of the surveys, the income category was not included because the figures seemed far fetched. The unrealistic figures might have been due to either concern for privacy or a lack of understanding of decimals.

There was no relationship between income (Table 2 an average monthly bill (Table 41).

Table 2



AGE

Six hundred fourteen of all respondents (41%) were under the age of thirty-two, while two hundred one were over fifty-five year old (13%). Six hundred seventy-nine were between the ages of 30 and 55 years (45%). The average ages of all respondents ranged between 39.2 % and 40.0 %. (Table 3)

GENDER

Females totaled slightly over sixty-one percent of the respondents on all surveys compared to nearly thirty-nine percent male respondents. (Table 4)

Table 3

Average Age of the Respondents

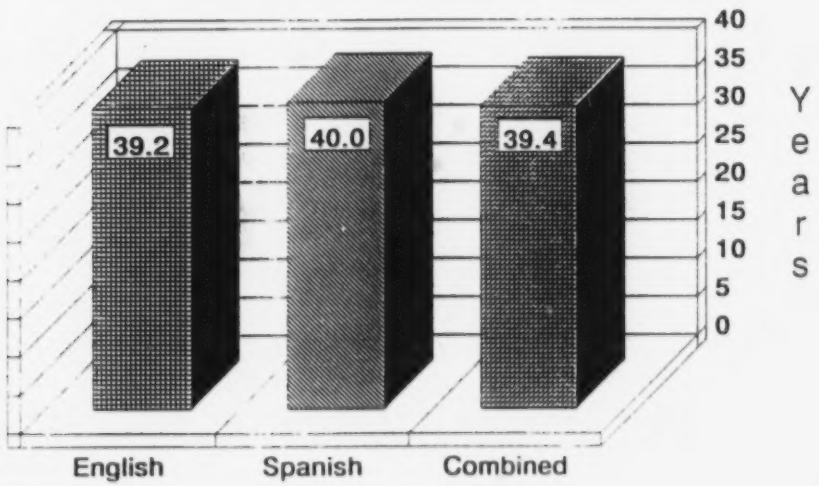
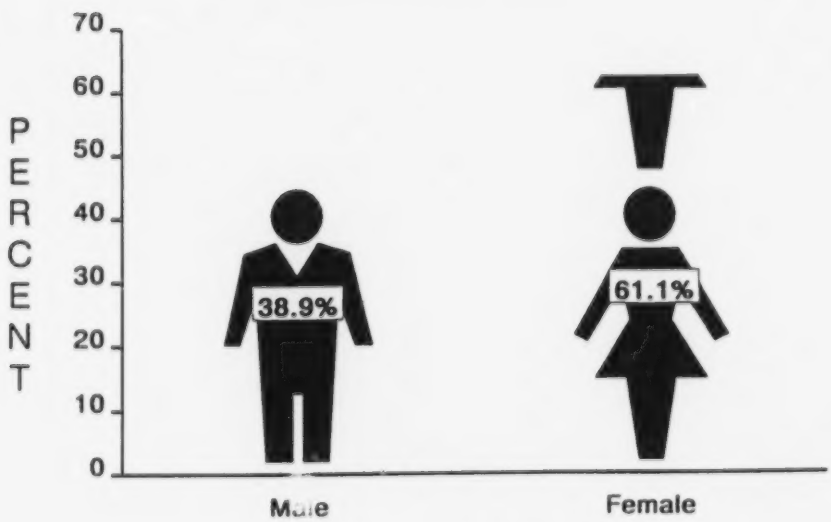


Table 4

Gender of Respondents

(Combined Surveys)



It is interesting to note that males completing the Spanish surveys (45.4%) averaged over eight percent greater than males completing the English surveys (37.3%), by contrast the females completing the English surveys (62.7%) averaged eight percent greater than the Spanish survey respondents (54.6%). (Table 5 and 6)

Table 5

Gender of Respondents
(English Surveys)

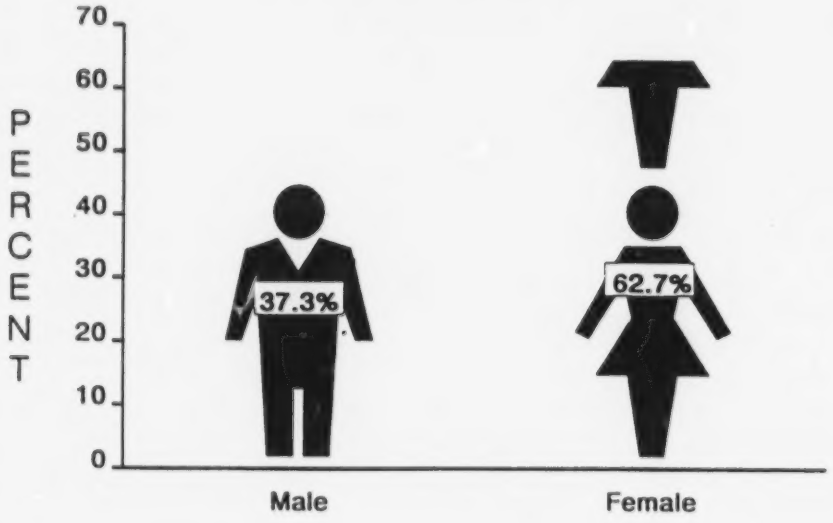
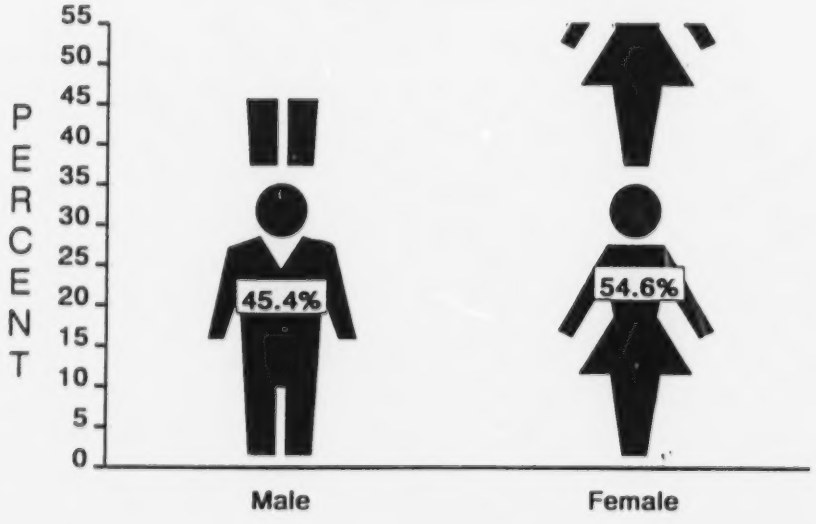


Table 6

Gender of Respondents
(Spanish Surveys)



MARITAL STATUS

Almost two-thirds of the respondentscompleting the Spanish surveys were married, however less than half of the English survey respondents were married.

Widowed and single respondents were counted as on category on Table 7.

SIZE OF FAMILIES

The average size of Spanish survey families was 4.4 while the English survey families 3.3 member per household. (Table 8)

Table 7

Marital Status of the Respondents

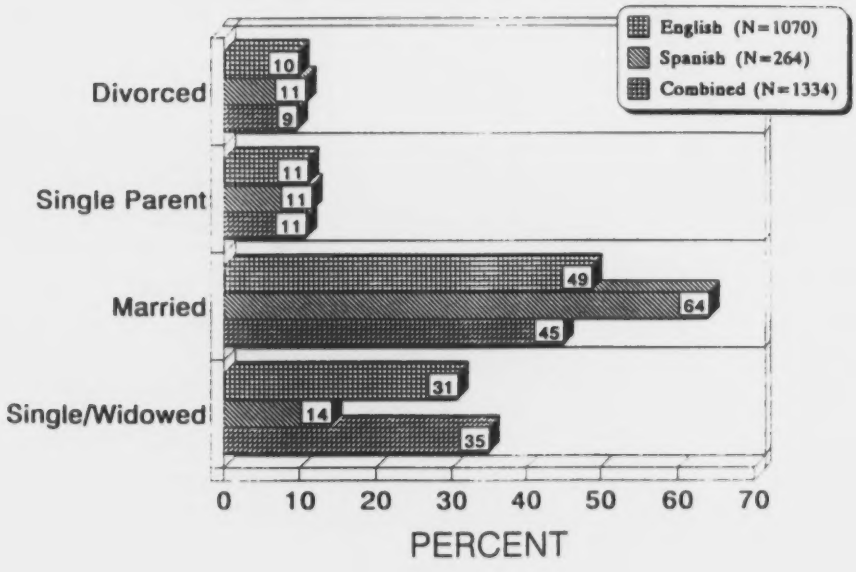
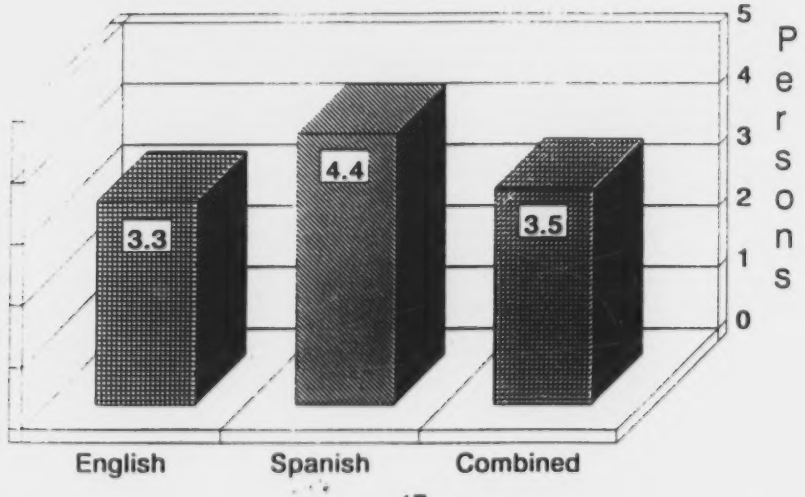


Table 8

Average Number of Persons in a Family



RESPONSE TO CLOSED-ENDED QUESTIONS

Telecommunications Equipment Owned by Respondents

Tables 9 and 10 illustrates that respondents had relatively the same number of telephones as they had phone numbers in their homes. Twice as many Spanish survey respondents (60%) as English respondents (30%) had only one telephone and phone number.

English survey respondents had more telephones and phone numbers in all multiple categories.

Table 9

Number of Telephones in the Home

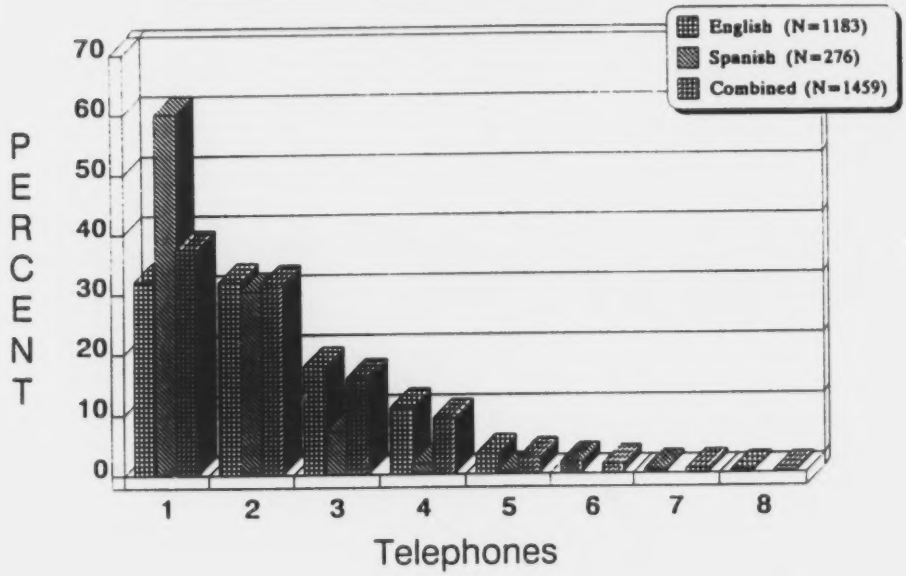
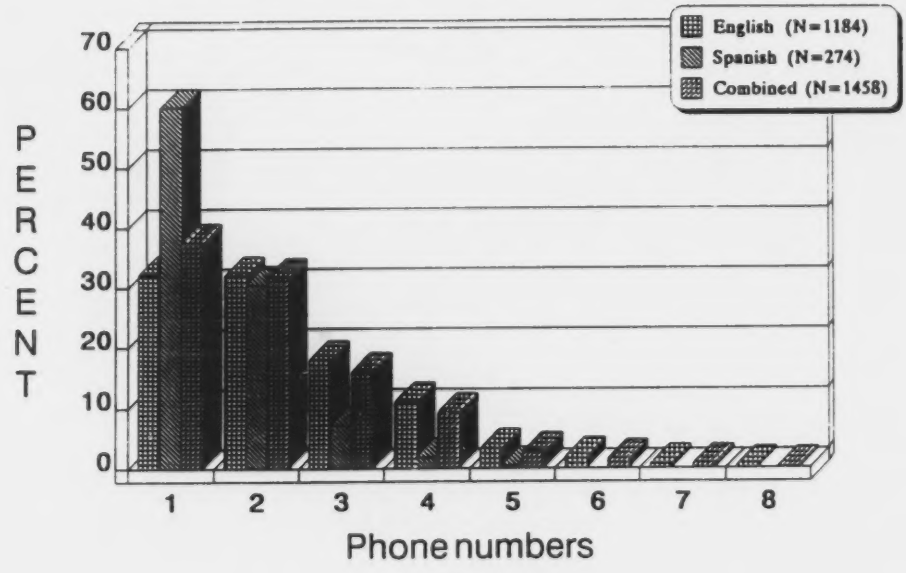


Table 10

Number of Phone Numbers in the Home



Almost three-fourth of all respondents use touch tone phones. Less than one-fourth owned rotary phones. (Tables 11-12) In the new telecommunications environment one needs the touch tone phones to take advantages of new services. Many businesses and public institutions depend on customers having touch tone telephones.

Table 11

Do you have a Touch Tone phone?

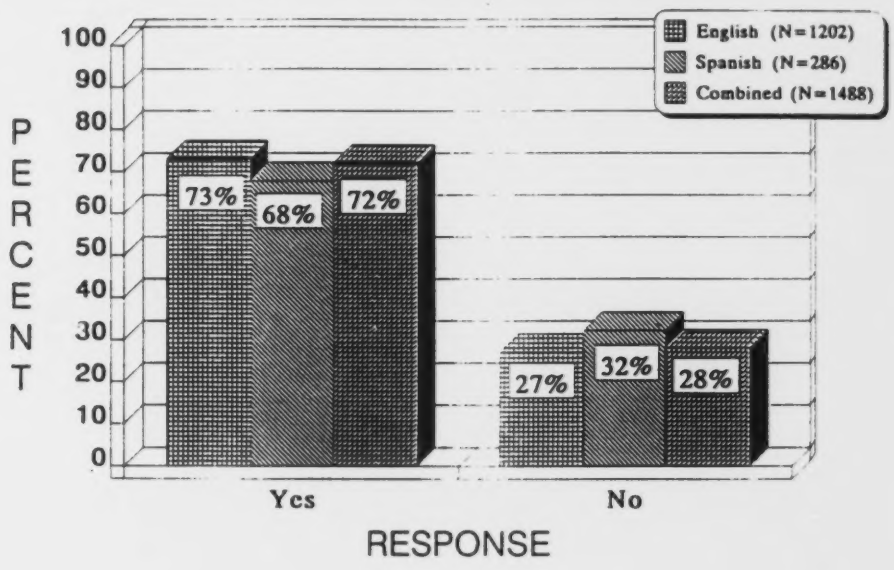
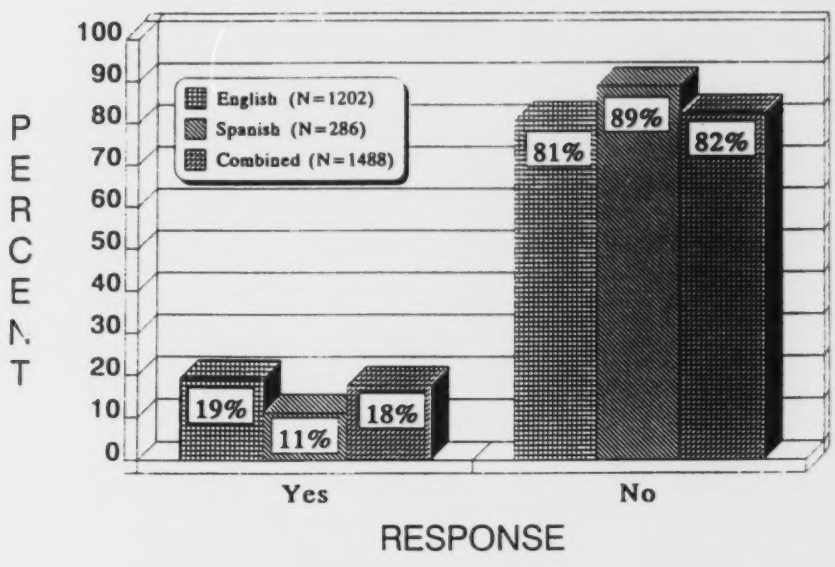


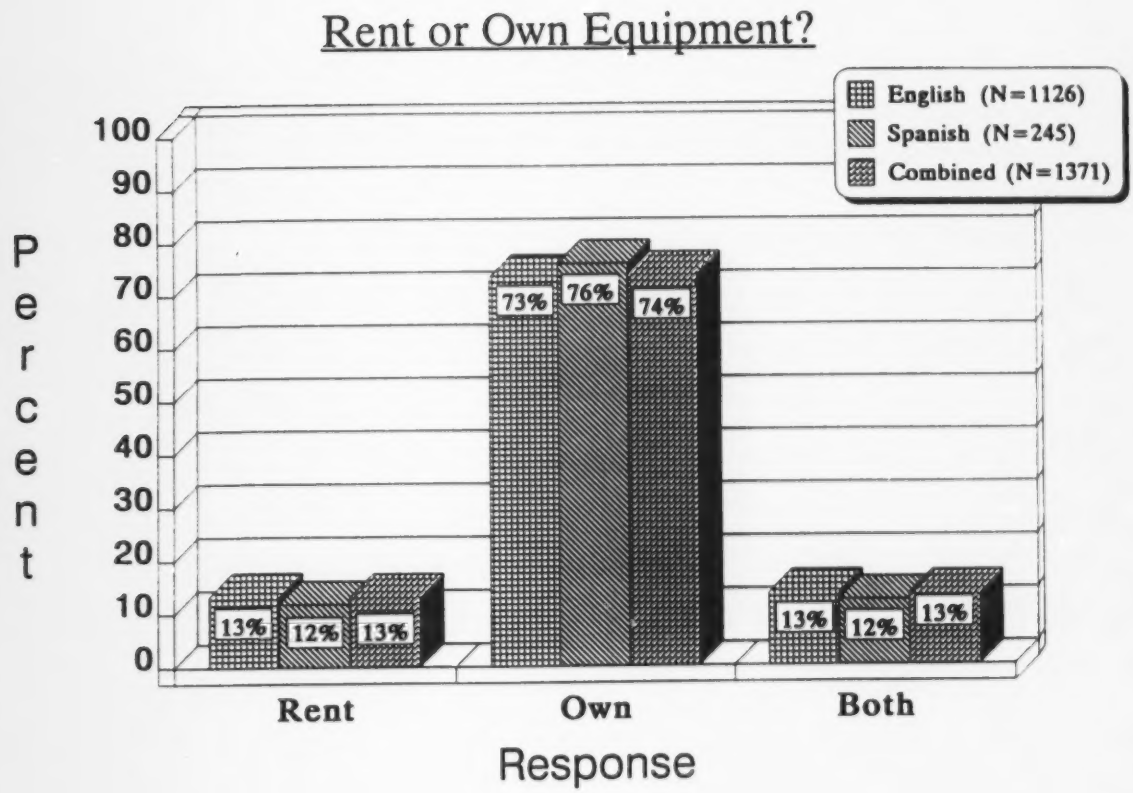
Table 12

Do you have a Rotary phone?



Slightly more than three-fourths of the Spanish survey respondents owned their phones and slightly less than three-fourths of the English survey respondents owned their phones.

Table 13

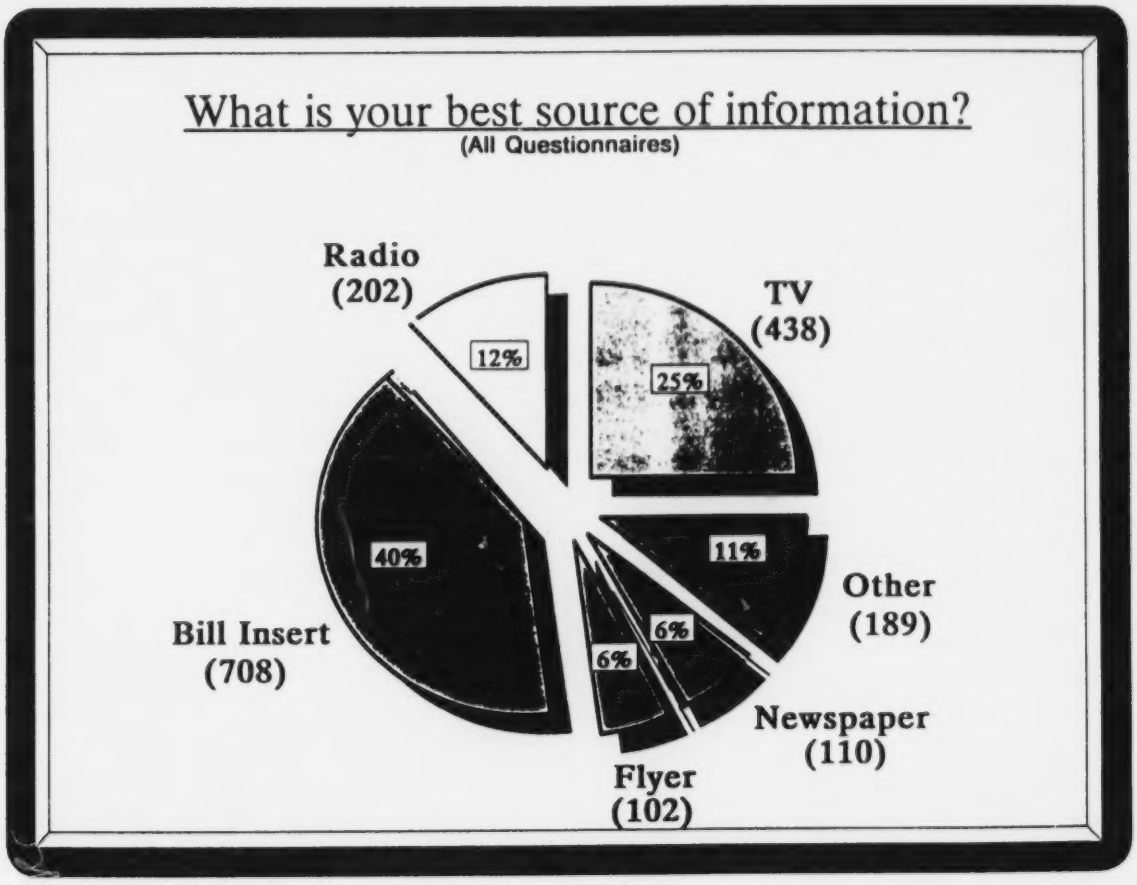


The following closed-ended questions regarding telecommunications choices, knowledge, and preferences were analyzed at the 0.05 level of significance. The analysis includes frequency of response, percentages and relationship between the various questions and age, annual income, and marital status. The English and Spanish surveys were treated separately.

The Best Source of Information

It is quite clear—from the data on tables 14 and 16—that bill inserts are the best source of information for the population surveyed. The least favored were newspapers and flyers or both English and Spanish survey respondents, however 7% of the English survey respondents prefered newspapers and flyers as a source of information while Spanish respondents chose a mere 2% and 1% for newspapers and flyers respectively.

Table 14



On the other hand, a larger percentage of Spanish survey respondents prefered T.V. -34%- compared to English respondents, 23%. Additionally, eight percent more Spanish respondents prefered radio, which received the third highest rating on the information preference scale.Many respondents chose more than one "best source of information", which accounts for the large number of responses listed on Tables 14 -16.

Table 15

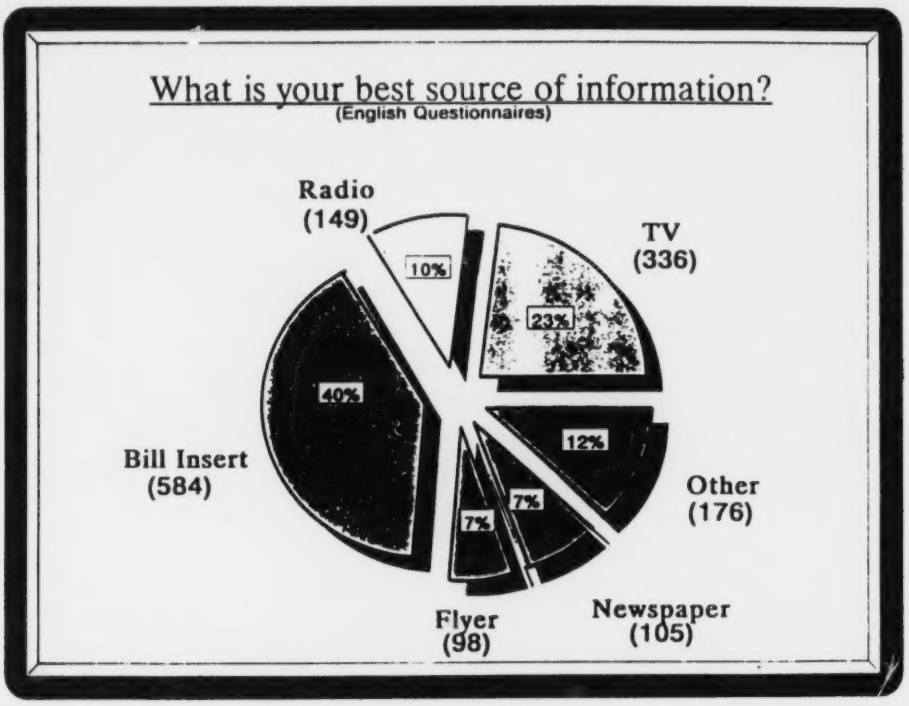
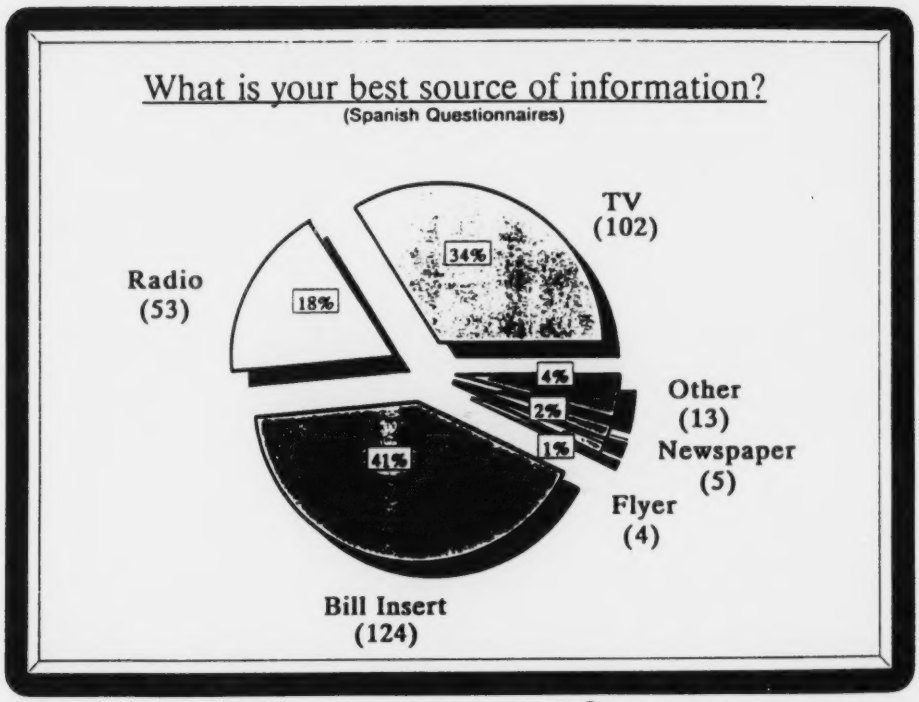


Table 16



The percentage of those choosing bill inserts coincided with the number who read the inserts.

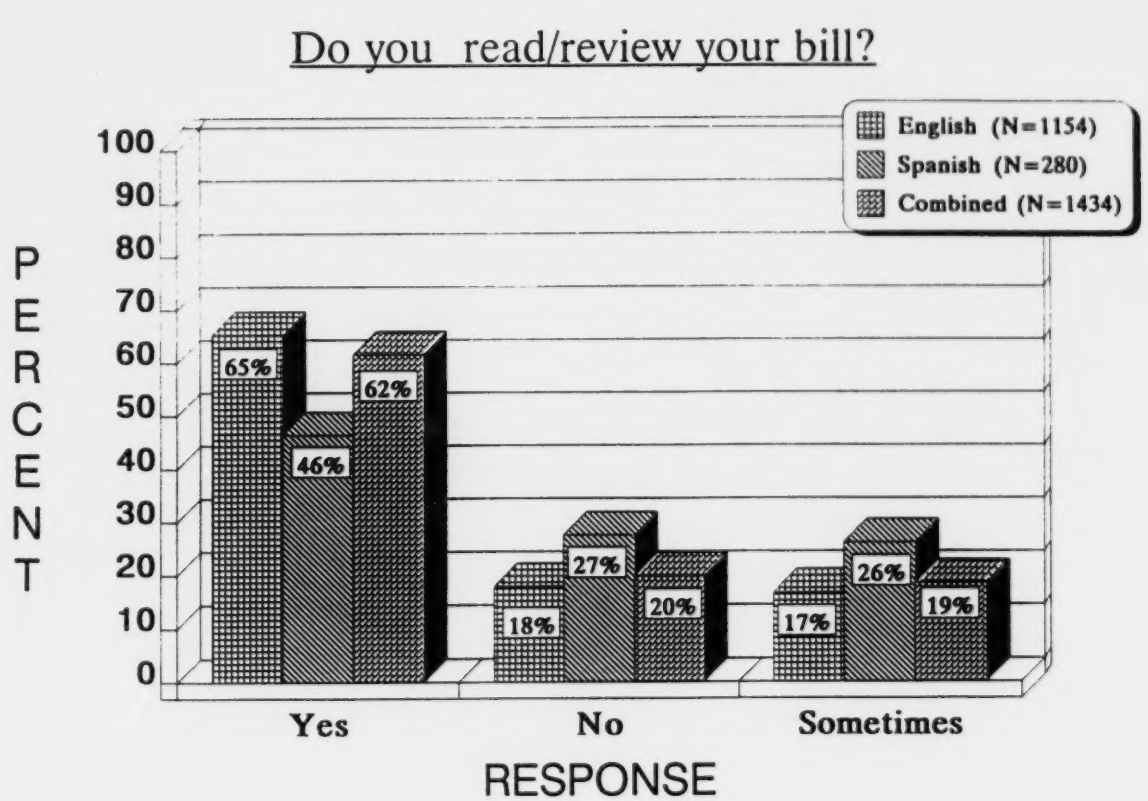
Almost half of the respondent on both surveys (English 47% and Spanish 44%) read bill insert announcements. However, nearly one-third of all respondents only read bill inserts sometimes .

A higher number of the Spanish survey respondents (32%) do not read inserts, compared to the twenty-five percent on English surveys.

On all surveys, there was no relationship between whether a respondent read his/her insert and his/her marital status. Nor, was there a relationship between whether one read his/her bill insert and age.

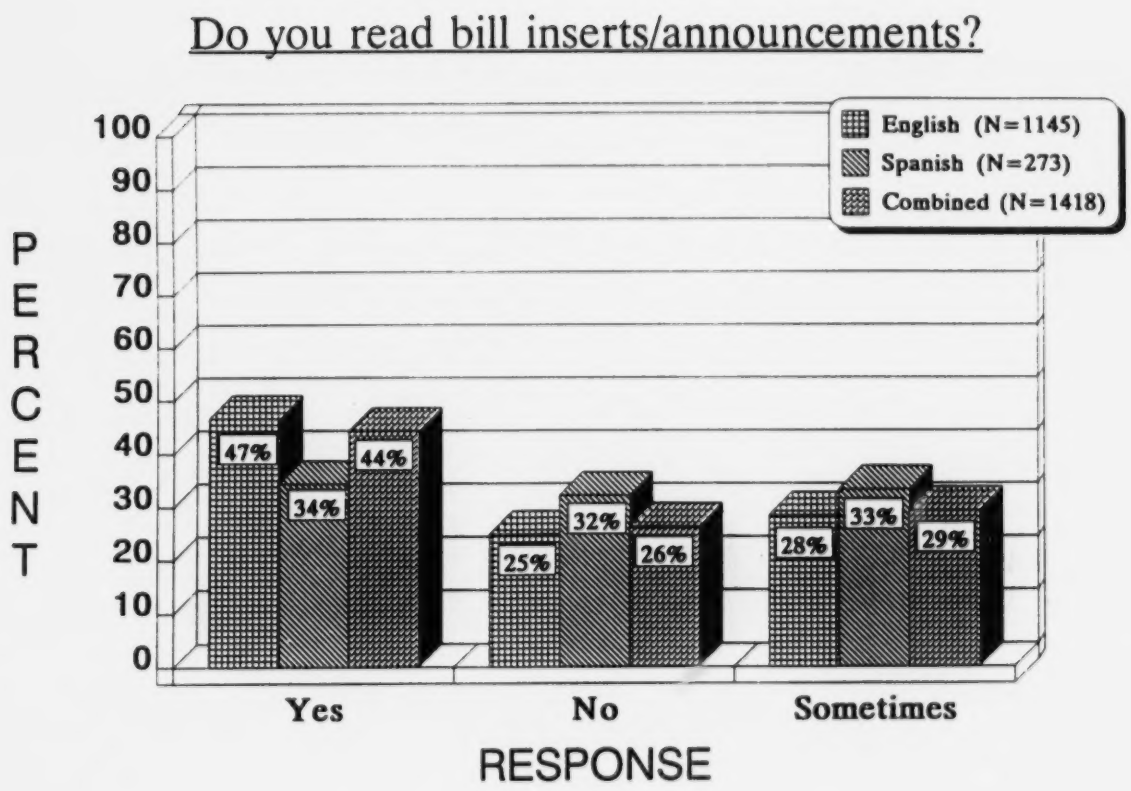
The average annual income of those who read bill inserts ($35,300) was significantly higher than those who don't readthe bill insert ($24,700), on the English surveys. Almost the opposite is true on the Spanish surveys where the average annual income of those who sometimes read their bill inserts was significantly lower than those who don't read their bill inserts ($26,300). Table 17.

Table 17



While nearly two-thirds of those completing the English surveys read/reviewed monthly bills, less than half completing the Spanish surveys read their bills. Both groups had a considerable number who did not read bill or read bills sometimes. (Table 18) Considering the number of billing error complaints—in the open-ended response section (tables 51-52). One would expect a larger number of respondents who read their bills.

Table 18



ENHANCED SERVICES

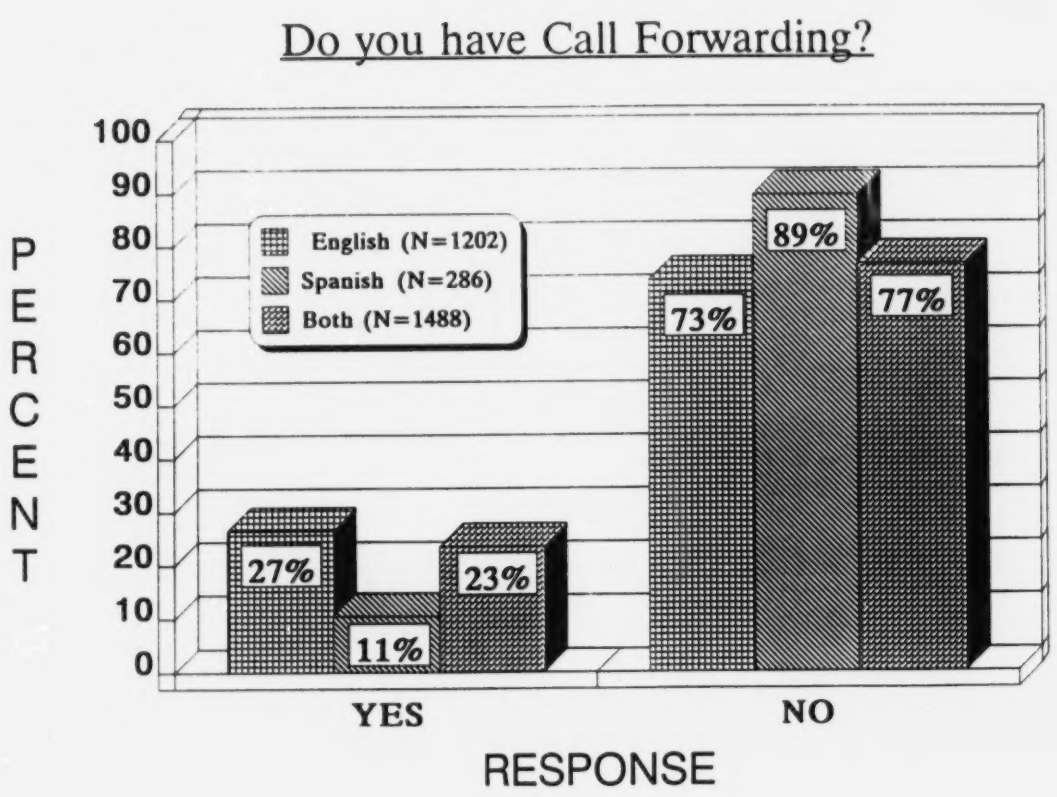
Enhanced services such as Call Forwarding, Call Waiting, and Conference Calls are high profile services in the target area. The next seven items deals with respondents ownership, level of use, and method of acquisition of such services.

CALL FORWARDING

More than twice the number of respondents on the English surveys (27%) as compared to the Spanish survey respondents (11%) owned the call forwarding service. Table 19. For all respondents, there was no relationship between whether a respondent had call forwarding and his/her marital status.

There was a significant difference - on the English surveys-in the income and age categories. The average annual income of those who used call forwarding often ($44,500) was significanly higher than those who did not have call forwarding ($30,000). Additonally, those who had call forwarding service had a lower age (37.7 years) than those without the service (41.2 years).

Table 19

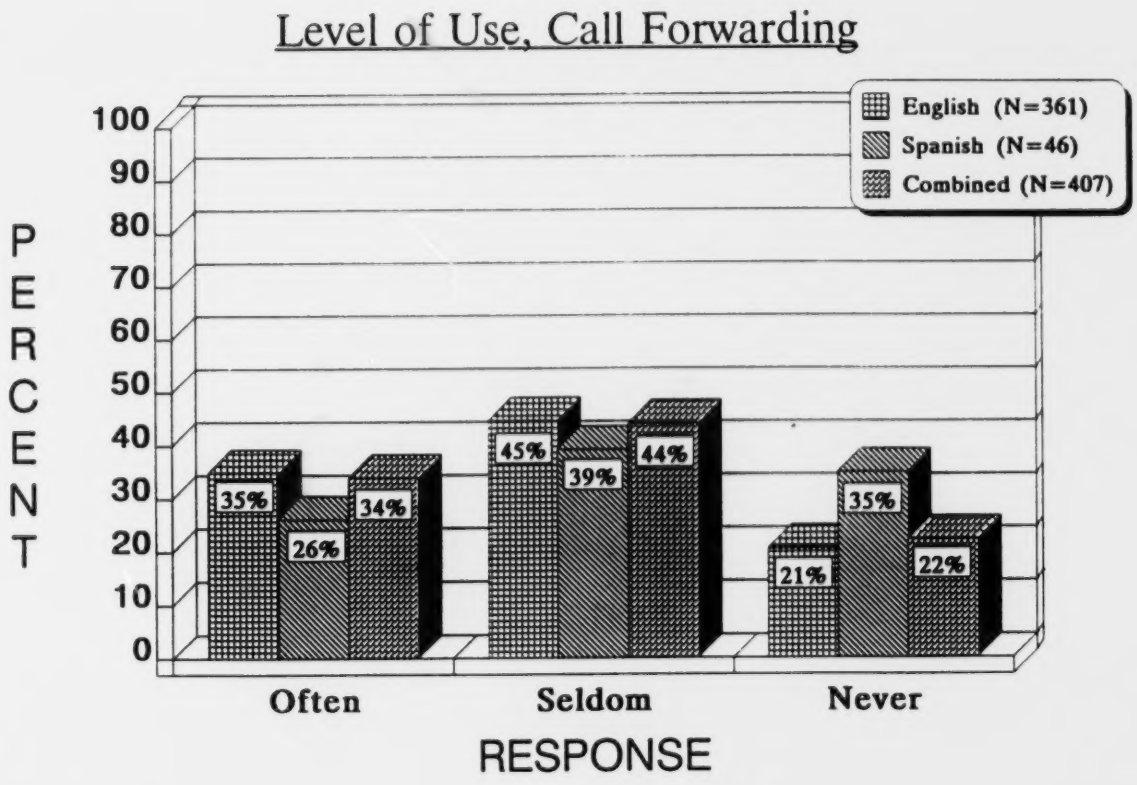


On the Spanish surveys, the average income of those owning call forwarding service ($38,700) was higher than those without it ($19,500). Regarding level of use, the average annual income of those who used call forwarding often ($34,750) was higher than those who did not use it ($13,500) but significantly (and curiously) lower than those who seldom used call forwarding ($ 39,200). Table 20

There was no relationship between level of use of call forwarding and the marital status or age of all respondents.

Spanish survey responses revealed a higher annual income level for those who seldom used call forwarding($39,200) compared to those who used call forwarding ($34,750). It is understandable that annual income of those who did not use call forwarding averaged $13,500.

Table 20



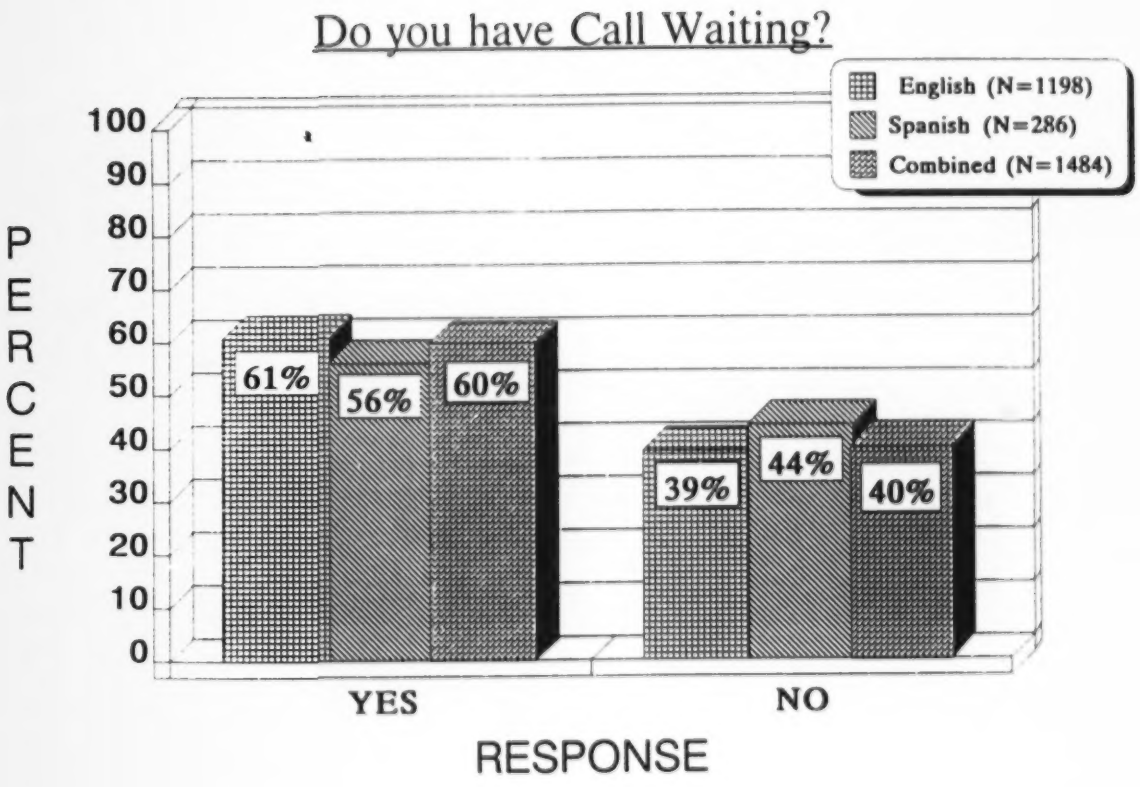
CALL WAITING

Of the enhanced services addressed in the study, Call Waiting is by far the most popular service. However, as previously mentioned (from verbal feedback of respondents during the survey process) many owned the entire "package" of enhanced services via Commstar. Sixty-one percent of the English survey respondents and fifty-six percent of the Spanish survey respondents owned Call Waiting.

The average age of those with Call Waiting service (37.7 years) was lower than those without Call Waiting (41.8) on the English surveys, but there was no significant difference between age and Call Waiting on the Spanish survey responses.

The level of use of Call Waiting and age of respondents was not significant on the English surveys. The age of Spanish survey respondents, who seldom use call waiting (30.6 years) is lower than those who use the service often (41.5 years).

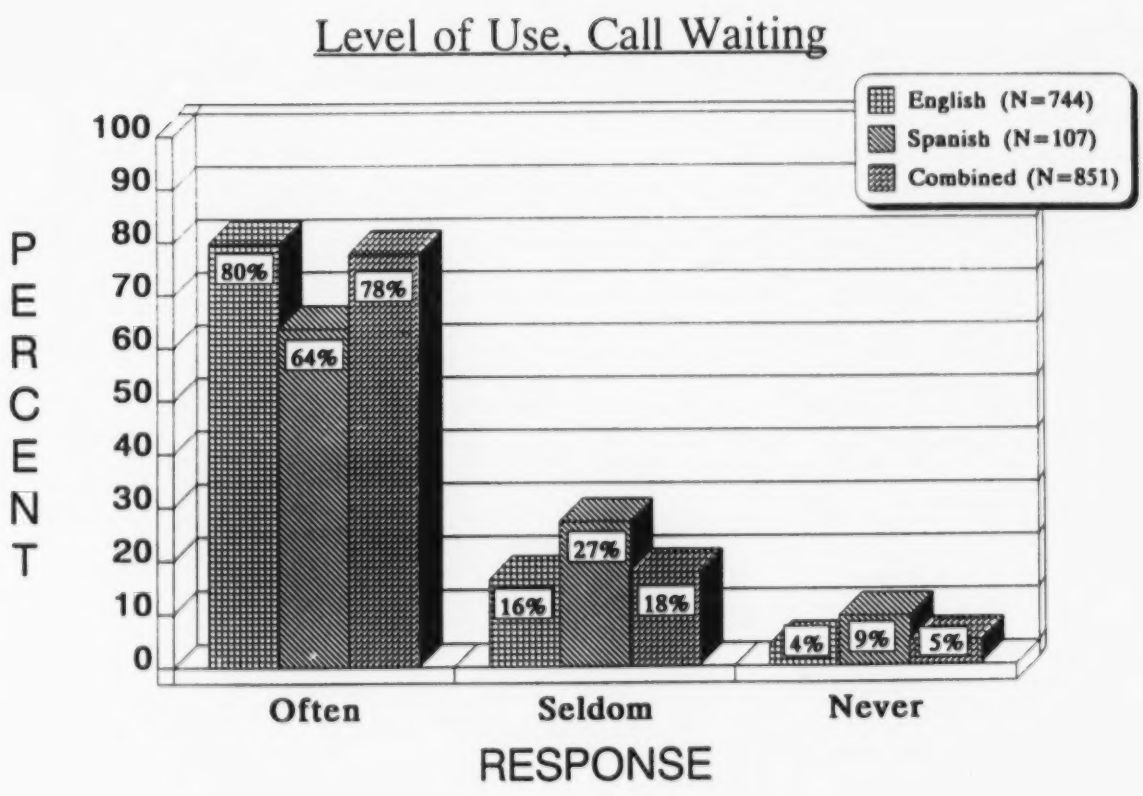
Table 21



There was no relationship between whether a respondent had or used Call Waiting and his/her marital status on all surveys.

Families with Call Waiting had higher incomes ($36,000—English survey and $28,800—Spanish surveys) than those without Call Waiting ($25,500—English and $18,500— Spanish). Additionally, those respondents who use call waiting most often had a higher average income ($37,300—average on both English and Spanish surveys) than those who did not have call waiting $26,800 on the English surveys and $18,400 on the Spanish surveys. On the Spanish surveys, those who never use Call Waiting had an average income of $7,200.

Table 22



CONFERENCE CALLS

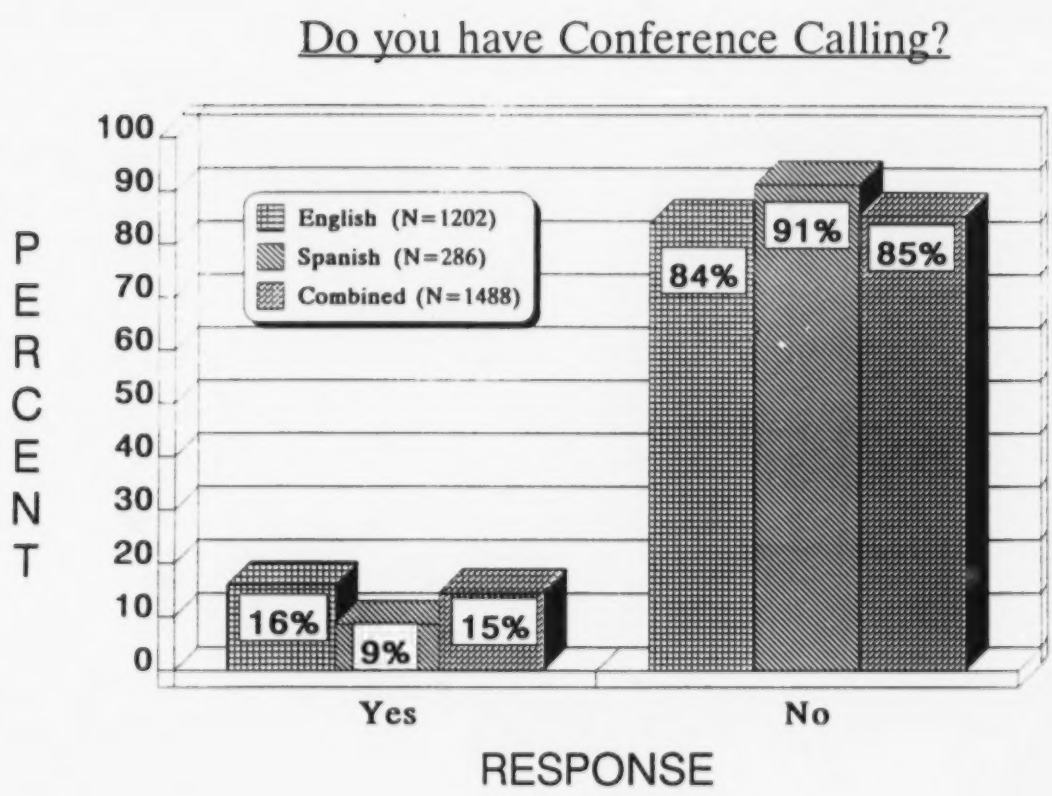
Conference call was the least used three enhanced services addressed in this study. Only sixteen percent of the English survey respondents and nine percent of the Spanish survey respondents owned the Confernce Call feature (Table 23). Again, it is possible that some respondents were unaware of the number of feature they purchased in the Commstar package.

The relationship between having or usings Conference Call service and the marital status or age of respondents was not statistically significant.

The average annual income of those respondents who had Conference Call service ($46,000 —English and $41,000) compared to those who didn't have the service ($30,000—English and $19,800—Spanish).

Conference Call users had the highest annual incomes of the respondents who used enhanced services.

Table 23



The average annual income of English survey repsondents who used conference calls often ($52,000) and seldom ($56,200)was significantly higher than those who never used Conference Calls ($28,200) and those who did not have Conference Calls ($29,200). The average annual income of Spanish survey respondents who seldom used conference calls ($39,300) was significantly higher than those who never used Conference Calls ($25,400) and those who did not have Conference Call service ($21,700).

On the question of how enhanced services were acquired, it is interesting to note on—Table 25—that, when calling for Basic Service, almost half of the Spanish survey respondents, and nearly 40% of the English survey respondents were sold enhanced services. The question of informed decision-making could again be raised from this and previous data on "level of use".

Table 24

Level of Use, Conference Calling

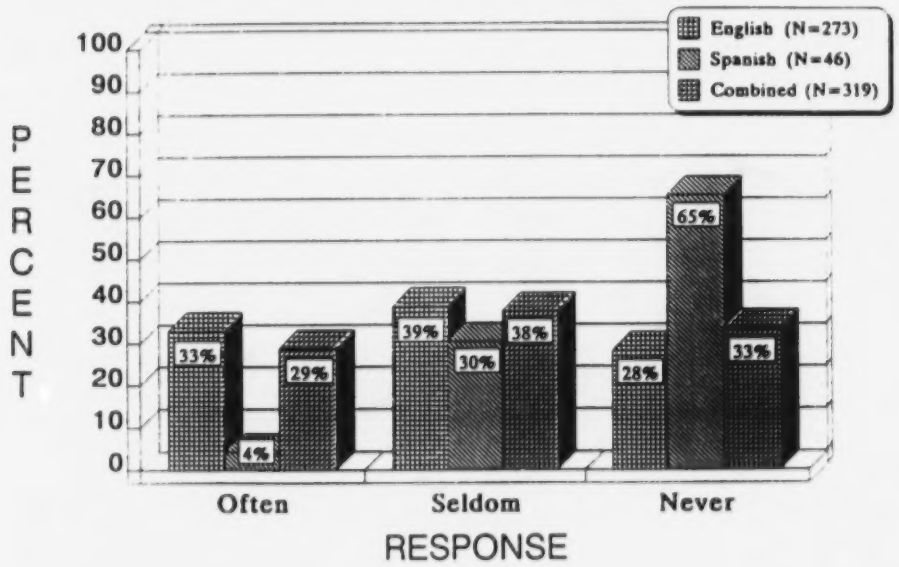
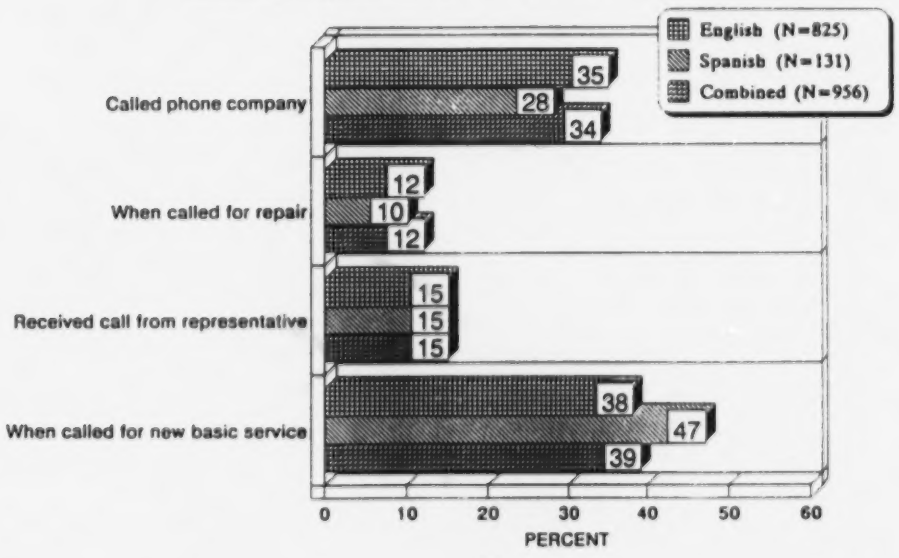


Table 25

How did you acquire your services?



UNIVERSAL LIFELINE

It is obvious that Universal Lifeline rates are underutilized by the population of this study. According to the income and the family size of previous discussions, a far greater number of respondents should be using the Universal Lifeline rates. According to the information on Table 26, only 23% of the English survey respondents and 17% of the Spanish survey respondents use Universal Lifeline services.

SINGLE PRODUCT PURCHASE

On the question "Do you prefer to purchase a single product?" Either respondents did not understand the question, or they were unfamiliar with the options available regarding the purchased of single enhanced services or a package of services.

Therefore, nearly all respondents left the question blank!

Table 26

Do you use Universal Lifeline services?

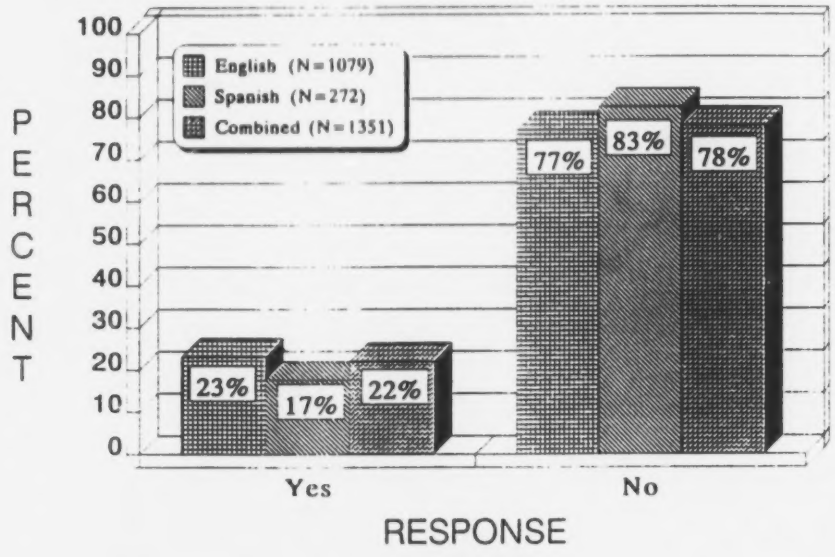
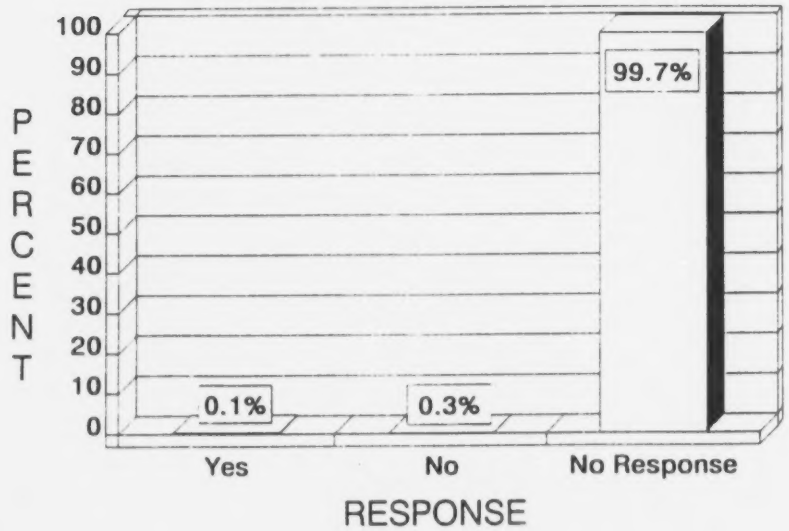


Table 27

Do you prefer to purchase a single product?

(All Surveys)



PHONE CREDIT CARDS

There has been an increased number of telephone credit cards mailed to consumers and the increased number of public phones available for credit card users over the past few years since the Ma Bell break-up. However, only 25% the target population on the English surveys and a mere 5% of the Spanish survey respondents use phone credit cards (Table 28).

INSIDE WIRE INSURANCE INSURANCE

Table 29 illustrates that only 25% of the English survey respondents and 15% of the Spanish survey respondents purchased Inside Wire Insurance.

Table 28

Do you use phone credit cards?

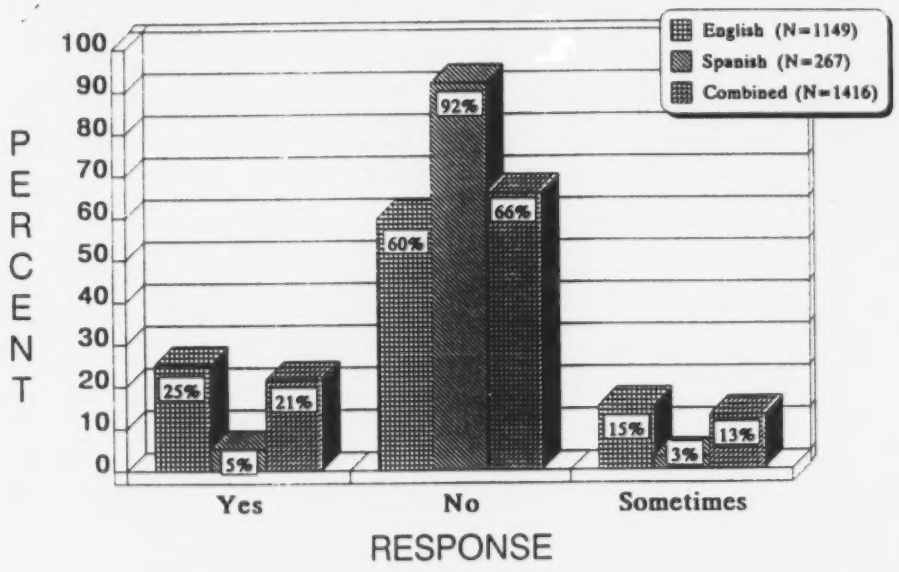
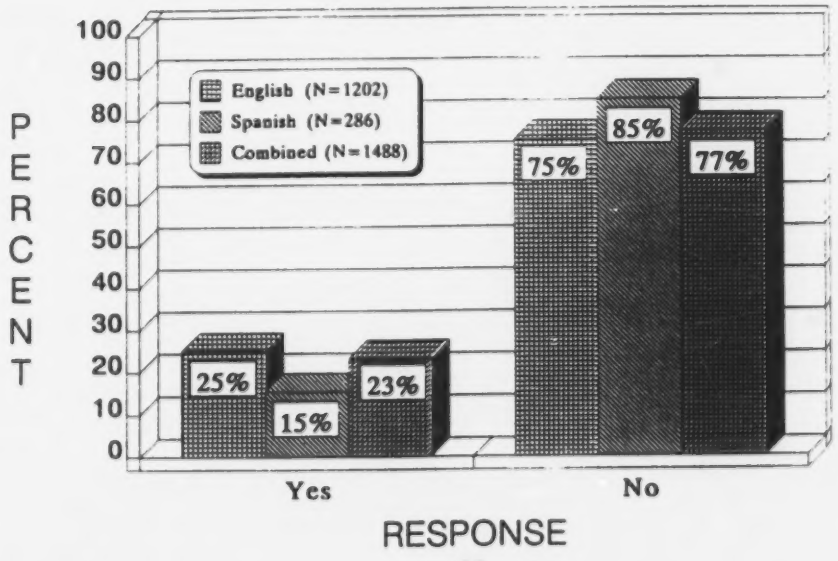


Table 29

Do you have Inside Wire Insurance?



NEW AND CONTROVERSIAL PRODUCTS AND SERVICES

The next six Tables (No. 30 - 35) are concerned with the question familiarity of relatively new telecommunications issues, products, and services. Participants were asked to respond to questions regarding 900 numbers; Cellular Phones; Voice Mail; Inside Wire (familiarity and level of use); and Fiber Optics.

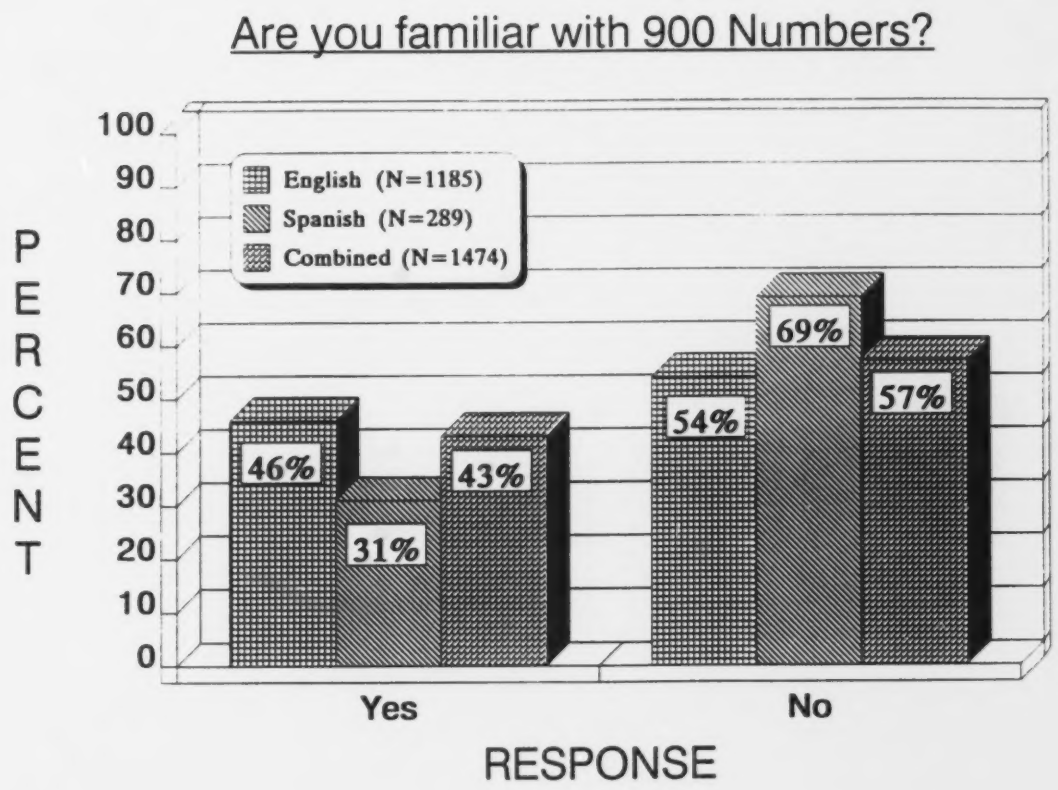
900 NUMBERS

When asked are you familiar with 900 numbers more than half and over two-thirds of the respondents, English and Spanish respectively, (Table 30) were unfamiliar with 900 numbers.

There was no relationship between familiarity with 900 numbers and age or marital status of respondents.

The average annual income was higher for those familiar with 900 numbers ($37,000—English and $30,800—Spanish) than those unfamiliar with 900 numbers ($28,700—English and $17,100—Spanish).

Table 30



CELLULAR PHONES

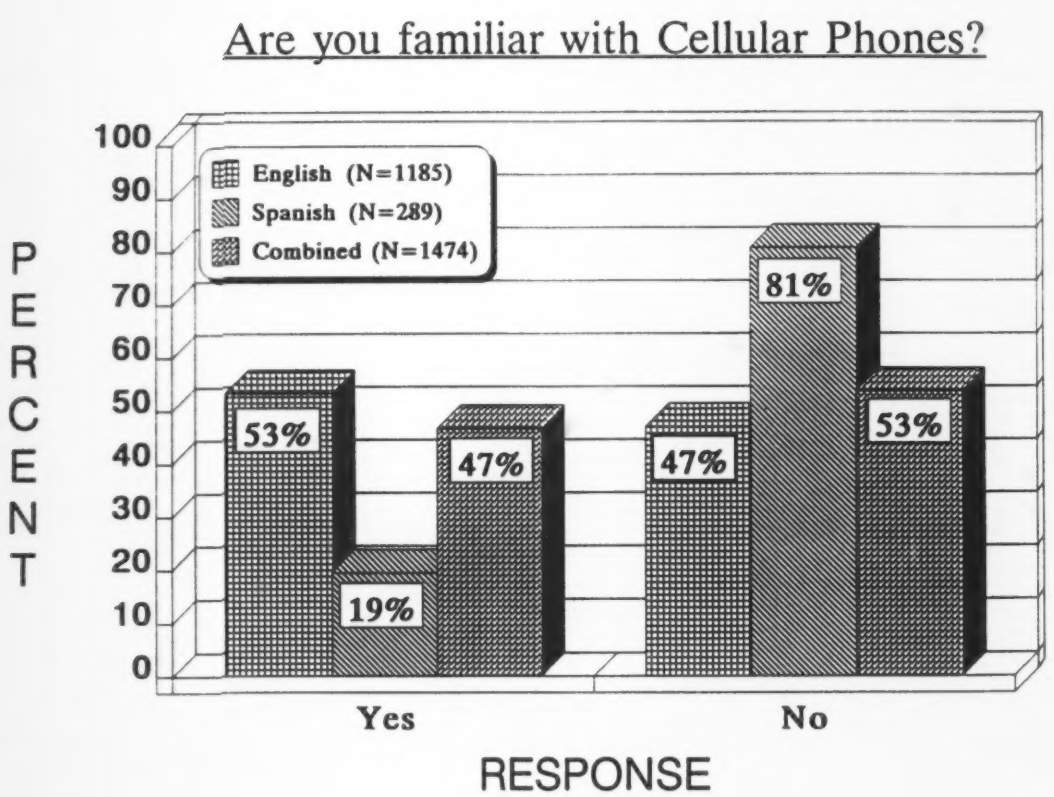
Cellular phones appears to be becoming increasingly popular in the target area. However, slightly over half of the English survey respondent (53%) and less than half of the Spanish survey respondents (47%) were familiar with Cellular phones. (Table 31)

There was no relationship between familiarity with Cellular phones and marital status of all respondents at the 0.05 level of significance. However, at the 0.07 level of significance, a higher percentage of single and married respondents were familiar with Cellular phones than divorced and single parent repondents on the English surveys.

Respondents who were slightly younger were most familiar with Cellular phones. The average age of all respondents familiar with Cellular phones was 37.8 years compared to the 40.7 years who were unfamiliar.

Higher income respondents were most familiar with Cellular phones. The average income of respondents familiar with Cellular phones ($39,200—English and $35,100—Spanish) was significantly higher than those unfamiliar with them ($24,250—English and $19,000 — Spanish).

Table 31



TELECOMMUNICATIONS PRODUCTS AND SERVICE TO MEET SPECIAL NEEDS

Tables 36 thru 38 are responses to the questions regarding familiarity with Special Telecommunications Services and Products: TDD (for deaf customers), Talking Yellow Pages and CRS (relay for hearing friends of the deaf).

TDD and CRS

As shown as Tables 36 and 37, only one percent of all respondents on both surveys were familiar with TDD and CRS. This demostrates another severe information void since many of the respondents were senior citizens, a population—some of which—might encounter loss of hearing. Additionally, it could be assumed that of all respondents, some could have members of their families or friends with hearing difficulties.

Do you have TDD (For Deaf Customers)?

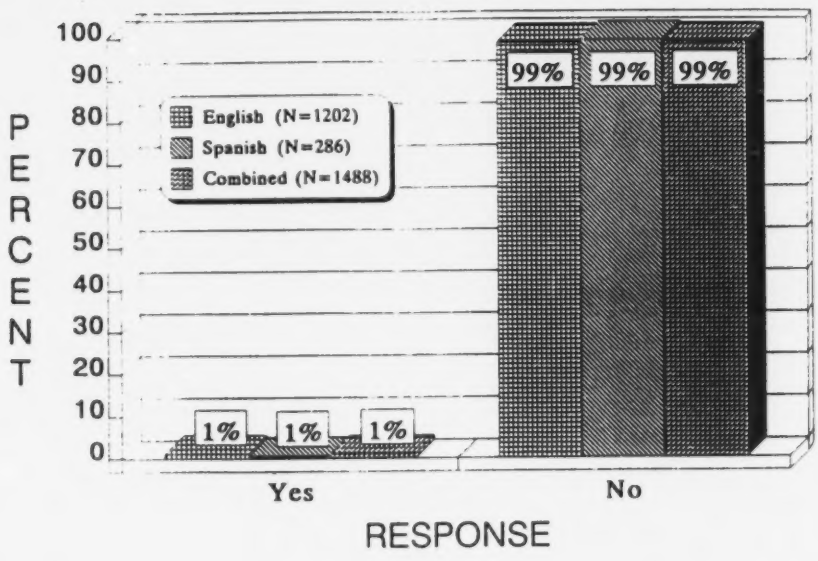


Table 36

Do you have CRS (Relay for Hearing Friends)?

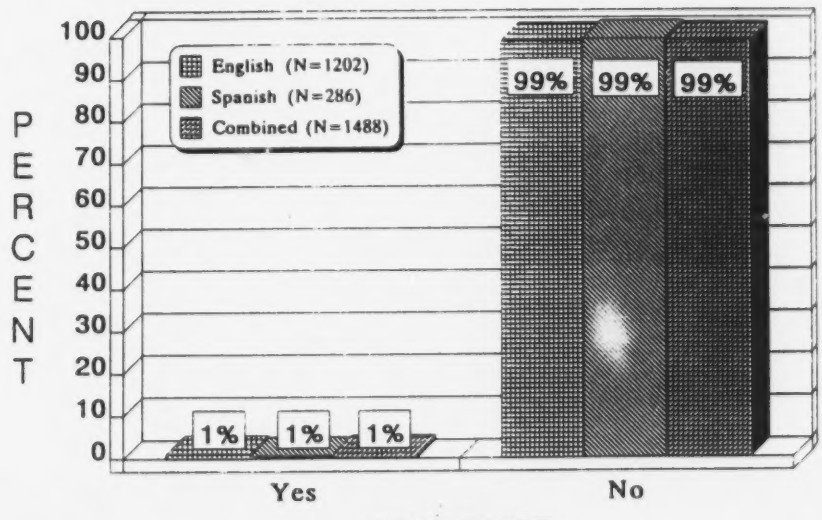


Table 37

TALKING YELLOW PAGES

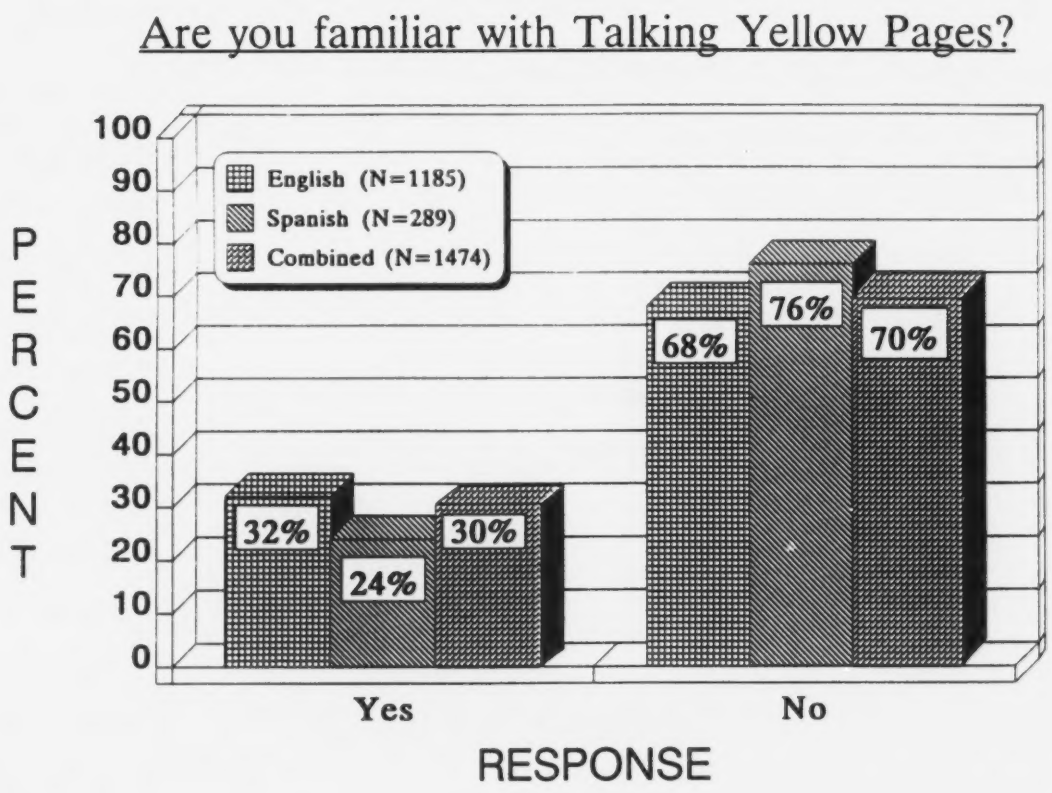
The Talking Yellow Pages the highest numbers of familiarity responses of the Special Services. Almost one-third of the English survey respondent and nearly one-fourth of the Spanish survey respondents were familiar with the service. (Table 37)

A larger percentage of single and married respondents on all surveys were familiar with talking yellow pages than those who were single parents or divorced.

English survey respondents familiar with the service were younger by nearly two and one half years (37.5 years - 39.9 years), but Spanish survey respondents familiar with the service were older by over four and one-half years (40.9 years - 36.3 years).

The relationship between familiarity with talking yellow pages and the average annual income of the English survey respondents was not statistically significant. By contrast, the average income of the Spanish survey respondents familiar with Talking Yellow pages ($23,200) was significantly hgher than those unfamiliar with it ($16,000).

Table 38



PRIVACY

The issue of privacy—with regards to the "new telecommunications environment is currently being addressed by consumer advocates, the industry, and the courts.

The questions:

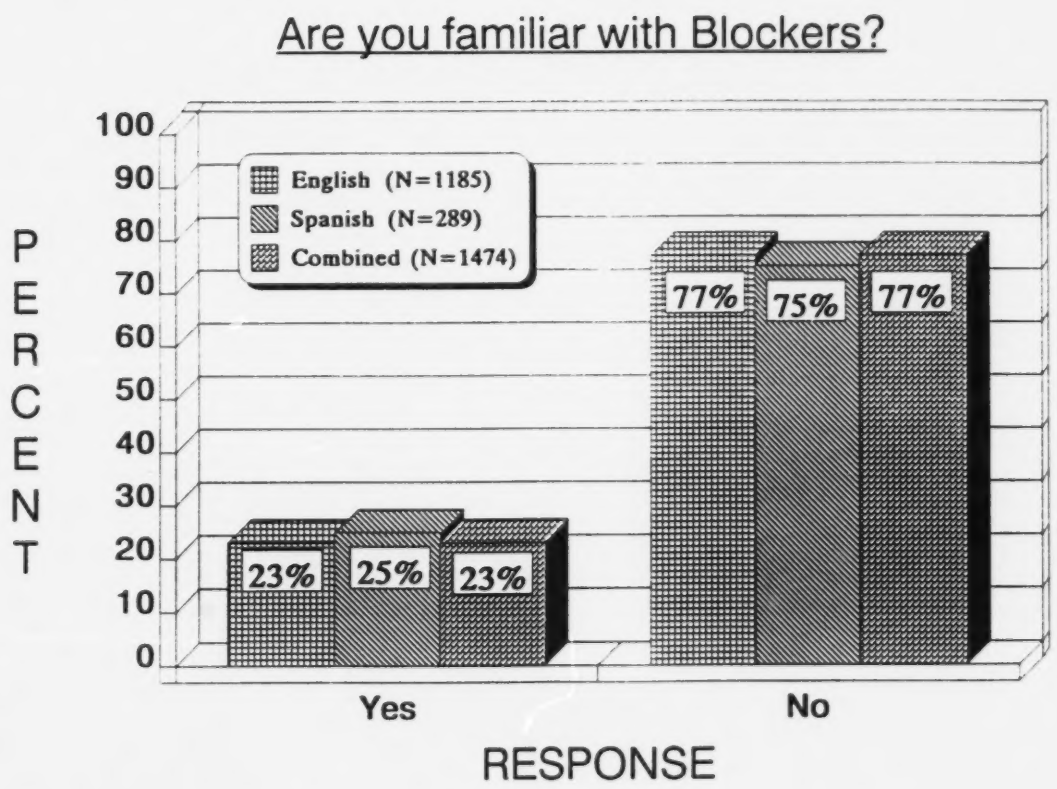
Are you familiar with Blockers? and Are you familiar with Telemarketing? addresses the issue of privacy in the closed-ended section of this study. (Tables 39 and 40)

BLOCKERS

Three-fourths of the respondent on all surveys were unfamiliar with the term "Blockers".

The relationship between familiarity with blockers and the average or marital status of respondents was not statistically significant. Nor, was average annual income significant on the English surveys. However, the average annual income of those familiar with Blockers on the Spanish surveys was significantly higher ($29,800) than those unfamiliar it blockers ($19,000).

Table 39



TELEMARKETING

Although only only one-fourth of all respondents were familiar with the term telemarketing on the closed-ended Table 40, it is important to note that it was one of the grave concerns on the open-ended Table.

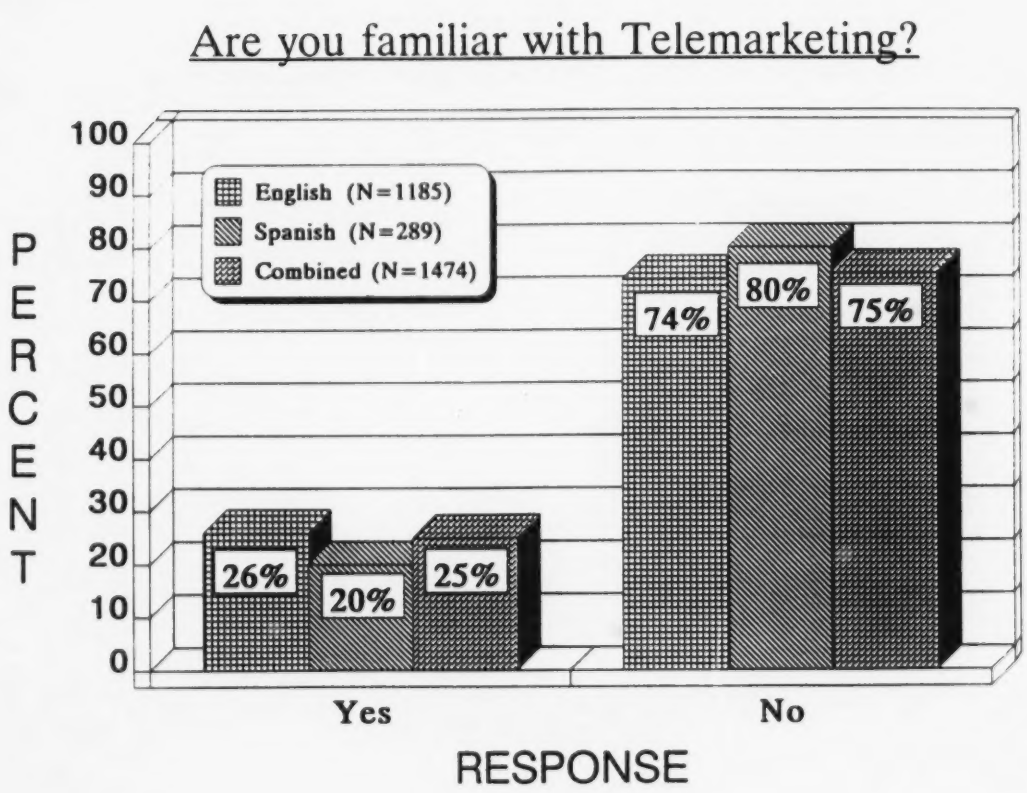
A larger number of married respondents were familiar with telemarketing—on both surveys—than those who were single, single parent, or divorced.

The relationship between familiarity and age was not statisfically significant on the English survey responses.

The average age of those familiar with telemarketing of the Spanish survey respondents (44 years) was significantly higher than those unfamiliar with it (38.9 years).

The average incomes of English ($45,260) and Spanish ($33,600) was significantly higher than those unfamiliar with telemarketing ($28,200—English and $18,700—Spanish).

Table 40



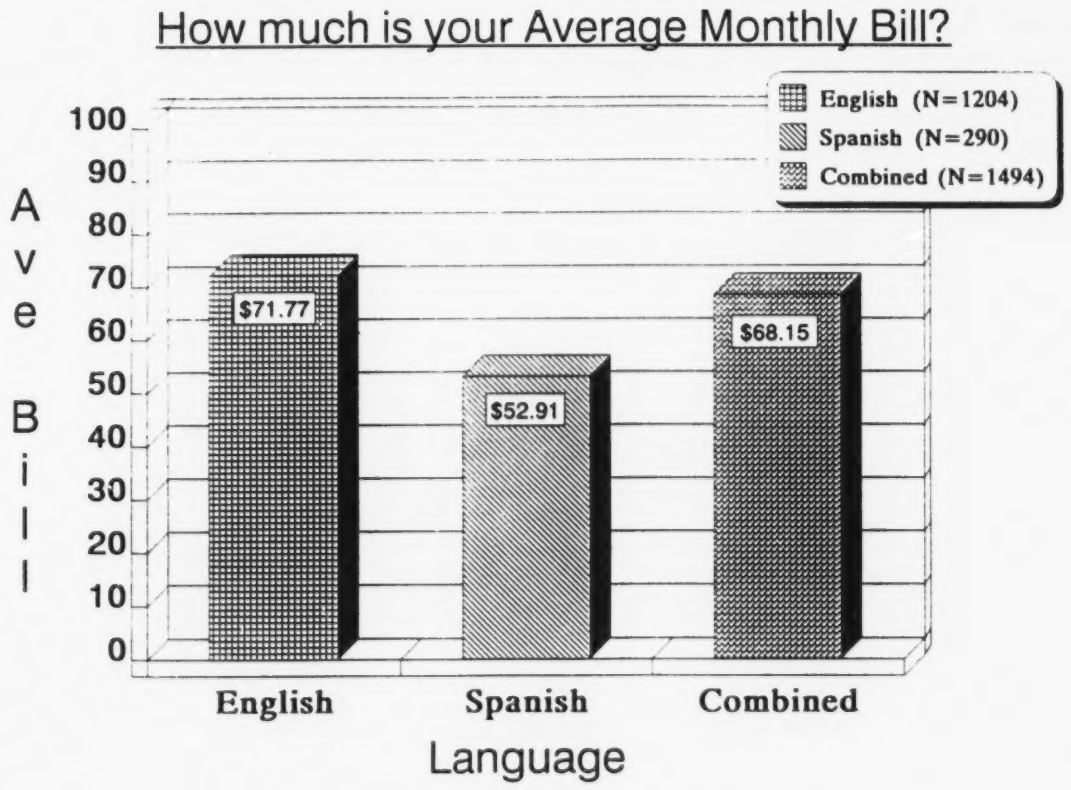
COST / PAYMENT OFFICE LOCATION

AVERAGE MONTHLY BILLS

Average monthly bills (Table 41), when compared to lifeline cost of $ 2.25 for 60 local limited calls (Pac Bell) or $4.20 for unlimited local calls.

There has been continuing discussions among the consumerist community regarding how the cost of enhanced services and toll charges might jeopardize the basic phone service. As previously mentioned, this study is concerned with determining whether or not consumers are making informed choices when using telecommunications dollars.

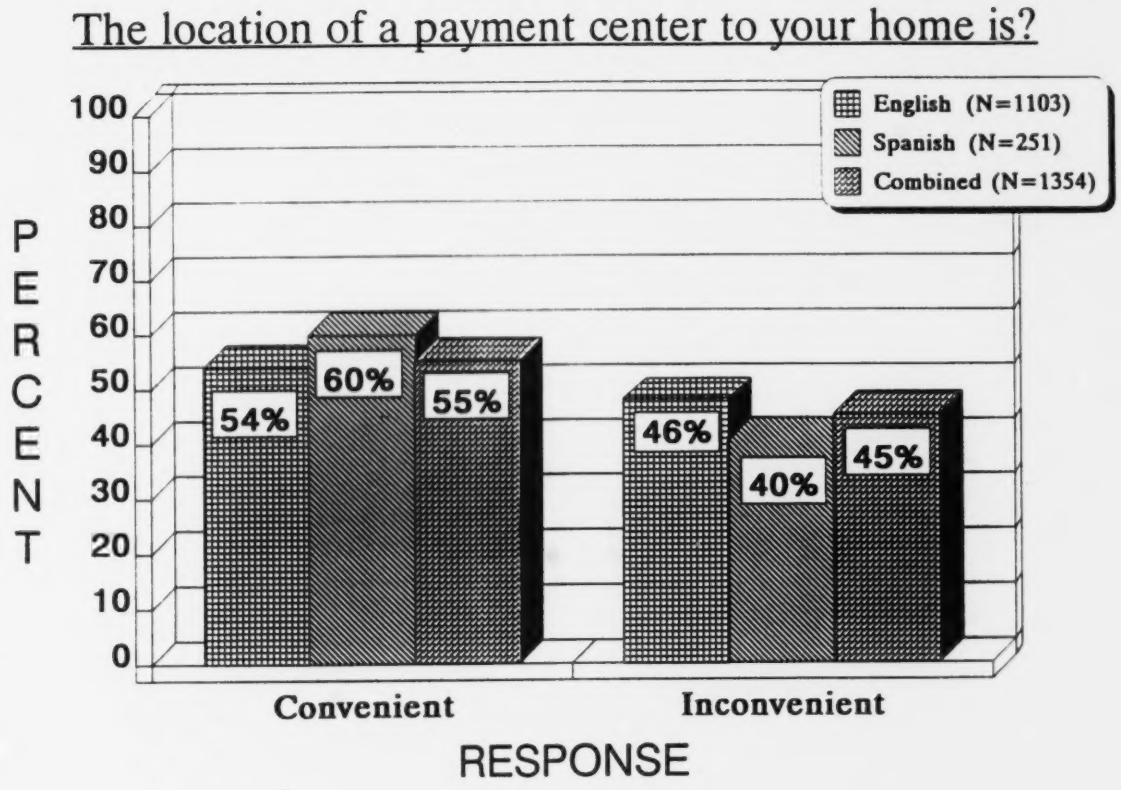
Table 41



LOCATION OF PAYMENT OFFICES

On the question of payment office location (Table 42) more than half of all survey respondents considered the location of their payment offices convenient. Spanish survey respondents (60%) were more pleased with the location of payment offices than English survey respondents (54%). This leaves a large segment of both populations (nearly half of all respondents) displeased with the location of their payment offices.

Table 42



OPEN-ENDED FINDINGS

This section reports responses to the following open-ended questions/request.

1) "If you have major concerns with the phone company, please describe". and

2) "What type of service would you like offered by the phone company?

The responses were tallied and categories were established after consultation with the project's community advisory group.

The following categories represents the most prevalent concerns and suggestions expressed by the respondents:

—Service Related Concerns and Suggestions (Tables 43-46)
—Cost Related Concerns and Suggestions (Tables 47-50)
—Billing Related Concerns and Suggestions (Tables 51-54)
—Privacy Related Concerns and Suggestions (Tables 55-58)

Other concerns and suggestions covered a variety of telecommunications issues as listed on Tables 59-61).

Service Related Concerns

Illustrating the confusion in today's telecommunications marketplace, a comparatively high number of the English survey respondents (Table 43) were displeased with the "Ma Bell" break-up (14) respondents second only to Billing Errors (19) on Table 51. Most of those respondents believed that there was a positive correlation between the Ma Bell break-up and poor telecommunications services.

Both English (9) and Spanish (3) survey respondents were displeased with new services and the information regarding those services. (Tables 43-44)

Three of the Spanish survey respondents compared to two English survey respondents listed payment office location as a major concern. This is curious, particularly since the Spanish surveys represented 19% of the total completed. (As mentioned previously, some bilingual Hispanics completed English surveys). Most of the Spanish surveys were completed by residents on the borders of Inglewood and Southgate. This raises questions about the accessibility of payment offices is those geographic areas. Additionally, there was a greater concern about the long waiting lines in payment offices on the Spanish surveys than on the English surveys.

The following are examples of Service Related Concerns as expressed by respondents:

RESPONDENTS MAJOR CONCERNS

Service related concerns:

- **Displeased with payment office location (2)**
- **Displeased with payment office service (3)**
- **Displeased with new service and information regarding those services (9)**
- **Confused/displeased with "Ma Bell" breakup (14)**

(English Survey)

Table 43

"Service is much harder to get than in the years before the phone co. break-up. Additionally, prices charged are much higher."
"More convenient payment centers. Their retail store is real close by but I don't even know where to pay the bill."

RESPONDENTS MAJOR CONCERNS

Service related concerns:

- **Displeased with payment office service (3)**
- **Displeased with new service and information regarding those services (3)**

(Spanish surveys)

Table 44

"I pay my phone bill at the phone company inHuntington Park and I wish they would leave more tellers so I don't have to stand in line 45 minutes everytime I go to pay the phone bill. I have to form a line outside their building."

SERVICE RELATED CONCERNS:
English Examples

"With deregulation, it cost us (public) too much money for services. Example—before you'd call and they provide service all most free of charge, now too expensive to call for services."

"I have problems with the pay phones they seem to be incapable in South Central Los Angeles."

"When you go to the office to do business, they put you on the telephone with the operator. How come they do not want to deal with you in person? It does not cost money. They do not want to give reasons that your bill is due. They ask too much for deposit on new service. Telephone service is a need. It is not a luxury."

SERVICE RELATED CONCERNS:
Spanish Examples

"Only when people go to pay their bills we can find big lines that is not good because (the) telephone company is a big company."

"On time there are very long lines from 4PM to 5:30PM."

SERVICE RELATED SUGGESTIONS

Most service related suggestions offered solutions to the problems of payment office service and location stated in the concerns. (Tables 45-46). However, several Spanish survey respondents felt that the telephone company should provide financial support—via philanthropic activities—to the community. Additionally, some members of the Hispanic community expressed a need for bilingual operators.

The following are Service Related Suggestion quotes:

"When service is to be installed, closer time for installation so (sic. I will not have to wait) all day for service man.

RESPONDENTS SUGGESTIONS

Service related suggestions:

- **Improve the service at the payment offices (4)**
- **More conveniently located offices (2)**
- **Improve overall quality of serive (13)**

(English Surveys)

Table 45

RESPONDENTS SUGGESTIONS

Service related suggestions:

- **Improve payment office services (4)**
- **More conveniently located offices (2)**
- **Offer community services (financial support for the community) (5)**
- **Provide bilingual service (4)**

(Spanish Surveys)

Table 46

"More and clear information regarding the services being offered."
"I would like to phone company to tell me about the various services and packages during the time I order the service not after I've already installed the service."

SERVICE RELATED SUGGESTIONS: English Examples

"I would like to see their directory updated, as far as business numbers, addresses. After ten years, people are still given the wrong address for Inglewood Juvenile Court. Everybody, it seems, that calls information for a number in this area are given the number for Juvenile Court."

"Quicker access to customer service answer—More information/and more courtesy."

"411 should be an information number that if you asked, or you (are) calling from a different area to find a business phone, like if you (are) calling from (818) need a (213) are phone # what they do they give you a phone # to get the information of that area instead of giving it to you" (sic— one information number for all area codes).

"Check and repair service three times a year, free of charge to all residents in California."

"There is static in the phone when talking at times also, there are to many systems to know who to call when problems occur."

SERVICE RELATED SUGGESTIONS: Spanish Examples

"More Spanish Operators"

"More courtesy"

"24 hour information"

"Information services in Spanish"

COST RELATED CONCERNS:

Basic Service received the highest number (12) of complaints on the English survey (Table 47), followed by the Cost of Toll Charges (10) complaints.

Although the subject of Long Distance services was not addressed in the closed ended section of the survey, respondents were encouraged to address any telecommunications issues they chose in the open-ended section.

Spanish survey respondents were most concerned with the cost of Long Distance calls (Table 48). Both Spanish and English survey respondents listed seven complaints (each) regarding the cost of Long Distance calls.

The cost of Equipment and Enhanced Services were not major concerns in this section of the study.

The following quotes relates to Cost of Service.

COST RELATED CONCERNS: English Examples

"The cost of toll calls"

"I feel that the division of large areas into different "area codes" is only a way to collect more money per call by making calls "long distance" calls where once they were local. I am very tired of it, and have tried to stop making calls outside my "area" which seems to be gettingsmall. Therefore I am getting a lot less for my money. I feel twenty dollars a month for the very smallest usage I can handle is too much. I don't think their "areas" are fooling too many consumer. If having a telephone wasn't such a safeguard. I would be tempted to get rid of it."

"I have no major complaints with the phone company I was voluntarily refunded more than $500.00 because of excessive services received at the beginning of new phone service. I was not aware of the regulations governing these excessive services and was called by a phone company representative who helped determine that many of the services I was paying more for were not needed. They have been very accommodating regarding billing and payments."

"Rate increases are put into language regular people cannot understand. Rate increases are pushed on consumers without adequate representation."

RESPONDENT'S MAJOR CONCERNS

Cost related concerns:

- **Basic Service too expensive (12)**
- **Toll calls too expensive (10)**
- **Long Distance cost too expensive (7)**

(English Surveys)

Table 47

"Cheaper rates! Or should I say more affordable rates!? The phone company works with the system to keep Americans in financial bondage. Don't worry about me though I ve got a plan! You think maybe I could tap the resources of my mind and use extra—sensory perception? That'll be the day Ma Bell goes under!"

COST RELATED CONCERNS: Spanish Examples

"I am very concerned with the expensive rates, especially because I have a large family out of the country and I find it too expensive to call them as often as I'd like."

"The telephone companies charge too much for reconnection services and deposit when the service is cut off due to lateness in payment of bill."

"My greatest concern is: increases in the tariff/ prices/ rates."

"Why are you being charged when you ask for your # not to be publicize the telephone directory?"

COST RELATED SUGGESTIONS:

The Cost Related suggestions (Tables 49 and 50) provides—in the respondent's view—remedies for the major complaints: Reduction of Cost for Basic Service, Reduction of Toll charges and Long Distance Service charges.

A variety of pricing structures were offered. On a few of the suggestions frustration and hostility were obvious. The following are examples major concerns as well as examples of "mood" of respondents who were upset about the cost of telecommunications services:

COST RELATED SUGGESTIONS:
English Examples

"I would like no charge for under 10 calls a month within a 30 mile radius. The bank offers free checking if under 10 checks are used."

"Toll calls and phone service period is a stone rip-off too expensive a typical American monopoly. I hate the phone company I'll be glad when they get some competition."

RESPONDENTS MAJOR CONCERNS

Cost related concerns:

- **Basic Service too expensive (5)**
- **Toll calls too expensive (4)**
- **Long distance cost too expensive (7)**

(Spanish Surveys)

Table 48

"I would like to know why you have to charge so much for long distance calls. I think we are not going to be able to call our beloved ones. Thank You."

RESPONDENTS SUGGESTIONS

Cost related suggestions:

- **Reduce cost of basic service (13)**
- **Reduce toll charges (8)**
- **Reduce long distance reates (7)**

(English Surveys)

Table 49

"I think that the cost structure of the calling card should be explained fully. Local calls are uneconomical. This was a real surprise to me when I received my phone bill. For the customers using universal lifetime, it is important that you caution them of usage. I have decided to use the calling card only in emergencies after receiving two outrageous phone bills."

RESPONDENTS SUGGESTIONS

Cost related suggestions:

- **Reduce cost of basic service (3)**
- **Reduce toll charges (2)**
- **Reduce long distance rates (3)**

(Spanish Surveys)

Table 50

BILLING RELATED MAJOR CONCERNS:

Unidentified call charges received the highest number of complaints (19—English and 9 Spanish) in the area of Billing Related Major Concerns on Tables 51 and 52. Many respondents, on both surveys, felt strongly about charges on their bill for call they did not make.

Why do they have to put so many separate bills in the envelope? I received 7 different sheets of paper bill ... with 2 pieces of paper had little more but name and number, and amount of the bill. Paper cost money and their is no need".

RESPONDENTS MAJOR CONCERNS

Billing related concerns:

- **Unidentified calls charged to consumer (19)**
- **Confusing bills (6)**

(English Surveys)

Table 51

"Refunds for the inadvertent charges that appear on customer phone bills. After the telephone company had done internal review"

RESPONDENTS MAJOR CONCERNS

Billing related concerns:

- **Unidentified calls charged to consumer (9)**
- **Confusing bills (3)**

(Spanish Surveys)

Table 52

"Frequently numbers appear on my telephone bill that I know were not made from my phone..They are usually very small amounts however throughout the year these do add up to a pretty large amount for the phone company especially if this is done to several people"

BILLING RELATED SUGGESTIONS:

Under the heading of Billing Related Suggestions, respondents wanted more accurate billing and offered some changes in the pricing structure. They are as follows:

RESPONDENTS SUGGESTIONS

Billing related suggestions:

- **More accurate billing (5)**
- **Creative billing (3)**

(English Surveys)

Table 53

RESPONDENTS SUGGESTIONS

Billing related suggestions:

- **More accurate billing (4)**
- **Creative billing (1)**

(Spanish Surveys)

Table 54

BILLING RELATED CONCERNS:
English Examples

"Being billed for calls that do not originate from my home."

" Inaccurate billing is fairly common (calls billed from outside lines to places I've never heard of."

"When a number shows up on your line and you know you have not made those calls I don't think it is fair you have to pay for those calls"

"I pay for circle calling but phone bill does not indicate my savings. Have called for information but still unsure. Otherwise no problems"

BILLING RELATED CONCERNS:
Spanish Examples

"On times you made mistakes and put on my bill too many calls that I never made."

"They charge for everything on times I do not know what I am paying for."

"Long distance calls being made by other persons but charged on my account. The telphone companies do not care to prevent and protect their clients/consumers."

"Yes you are charging for calls from other areas that we do not make."

BILLING RELATED SUGGESTIONS:

Under the heading of Billing Related Suggestions, respondents wanted more accurate billing and offered some changes in the pricing structure. They are as follows:

BILLING RELATED SUGGESTIONS:
English Examples

"More accurate billing of phone calls. Too many calls on phone bill that weren't made from my home"

"Efficient service, well accounted to avoid inexistent charges"

"I would like for you to be more honest in your charges. Every monthly bill has ten or fifteen calls unknown to me. I do not even know the cities. It is impossible to call every month and ask to remove those call from my bill"

"A reminder when your bill is due."

BILLING RELATED SUGGESTIONS:
Spanish Examples

"My concern is that you charge what is fair and review the calls being made and not to be over charged"

"To be able to pay local and long distance calls in one bill."

PRIVACY RELATED CONCERNS:

Telemarketing received the highest number of complaints in the privacy related issues category, particularly on the English surveys (Tables 55-56).

Obscene calls were the second major complaint. On the Spanish surveys, only one complaint was registered (Table 56) but, four Spanish survey respondents on Table 58 (Privacy related Suggestions) wanted calls blocked.

PRIVACY RELATED CONCERNS:
English Examples

"I hate telemarketing"

"I do not like telemarketing"

PRIVACY RELATED CONCERNS:
Spanish Examples

"To whom are being provided with our telephone number: By example: credit companies, business, or merchants

"Too many obscene calls. I changed my number twice and still being bothered. What can I do: The police is not doing anything".

"Don't care for long distance credit card solicitation over the phone (personal information required which I don't care to give out)."

RESPONDENTS MAJOR CONCERNS

Privacy related Isues:

- **Disturbed by obscene telephone calls (5)**
- **Displeased with telemarketing (7)**

(English Surveys)

Table 55

"I dislike receiving phone calls from a computer selling a product".

RESPONDENTS MAJOR CONCERNS

Privacy related Issues:

- **Disturbed by obscene telephone calls (1)**
- **Displeased with telemarketing (2)**

(Spanish Surveys)

Table 56

PRIVACY RELATED SUGGESTIONS:

The suggestions related to the privacy reflects the major concerns. Respondents desire protection against excessive telemarketing, obscence and anonymous call.

Several wanted their phone numbers kept private—one stated that changing one's phone number does not help the situation.

Many respondents wanted the ability to block call or access to equipment which would provide a digital display of callers phone numbers.

PRIVACY RELATED SUGGESTIONS:
English Examples

"Elimination of computer calls"

"I would like a digital display of the persons telephone number who is phoning my home number. I would like this service to be available"

"Pre-answer telephone number service rentable in cases of obscene phone calls"

"More information about 900 numbers and how to block them"

"PRIVACY RELATED SUGGESTIONS:
Spanish Examples

"To be able to know who is calling you"

"To discover or find who is making anonymous calls"

"Telephone number being sold to firms and businesses and disturbances of quiet time: invasion of privacy."

RESPONDENTS SUGGESTIONS

Privacy related suggestions:

- **Block obscene calls (2)**
- **Block telemarketing (3)**

(English Survey)

Table 57

"I would like a digital display of the persons telephone number who is phoning my home number. I would like this service to be available"

RESPONDENTS SUGGESTIONS

Privacy related suggestions:

- **Block obscene calls (4)**
- **Block telemarketing (5)**

(Spanish Survey)

Table 58

I have no problem with the phone company, however, I think telephone solicitation should be made illegal as an involuntary invasion of privacy/I can put a "no solicitor" sign on my door, but not on my phone. Television, newspapers, mail, serve well enough"

GENERAL CONCERNS:

Unrealiable Public Telephones were a major concern, particularly to Spanish survey respondents registering seven complaints, compared to the two English survey respondents who listed Public Telephones as a concern. (Tables 59 and 60).

Some respondents on the Spanish survey felt that the phone should assist the community financially, provide jobs and support education.

Thirty-four English survey respondents and eleven Spanish survey respondents stated that they were generally dissatisfied with telecommunications services and products.

Seven English survey respondents and two Spanish survey respondents stated that they were generally satisfied with telecommunications services and products.

" With the optic Fibers telephone companies are saving lots of money. What benefits are you giving to the clients/ consumers?"

RESPONDENTS MAJOR CONCERNS

Other concerns:

- **Displeased with payphone service (2)**
- **Generally dissatisfied (34)**
- **Generally satisfied (7)**

(English Surveys)

Table 59

"I do not see the benefits of the break up of "Ma Bell" in many small other companies. Confusion is greater but what is the people's gain?"

RESPONDENTS MAJOR CONCERNS

Other concerns:

- **Displeased with payphone service (7)**
- **Generally dissatisfied (11)**
- **Generally satisfied (2)**

(Spanish Surveys)

Table 60

"Too much competition between phone companies which clutters and confuses the customer/consumer"

"The public telephone service is very bad most of the public telephones do not work"

OTHER GENERAL SUGGESTIONS

- ✔ **English surveys (18)**
- ✔ **Spanish surveys (7)**

Table 61

"Blueprint of phonelines and boxes under the house and where they connect inside the house"

OTHER MAJOR CONCERNS:
English Examples

"How often do you do wiring on telephone poles, sometimes the wires are worn and need special attention (to repair or remove)"

"More information about 900 numbers and how to block them"

"Yellow pages are now designed by an illogical (and diseased mind)"

OTHER MAJOR CONCERNS:
Spanish Examples

"What the telephone companies are giving back to the consumers. They just make money out of us"

"Help the schools that are needed badly resources"

"What the telphone companies are doing in behalf of the poor communities?"

"The public telephones are trash"

"The public telephones steal the money"

"Place job opportunities for the youngsters of the community. Attentively: Divorce mother with six children"

GENERAL SUGGESTIONS:

There were a variety of General Suggestions by respondents on both surveys. The following are examples of such variety:

English and Spanish Examples

"Wish my cordless phone worked better—there is lots of noise and static —Often I have to get on another phone—very unsatisfactory"

"Secure privacy better regarding phone men being able to dial a number from your line. PAC Bell and AT&T merge back rate into one"

COMPARISON OF CLOSED-ENDED AND OPEN-ENDED FINDINGS:

A brief comparison of closed-ended and open-ended surveys resulted in the following observations:

Many viewed the open-ended section as an opportunity to address issues in addition to those addressed in the closed-ended section.

Generally, the problems identified in the closed-ended section—mainly a lack of knowledge of several new and controversial services and underutilized services, i.e. universal lifeline, call forward and conference calls—may be the nexsus for cost complaints. Additionally, there may be a direct correlation between complaints about Toll Charges on Tables 49 and 50 and average monthly bills on Table 41.

Although knowledge of Telemarketing in the closed-ended category was minimal, telemarketing was a major complaint in the privacy category in the open-ended section.

Only 62% of the English and 46% of the Spanish survey respondents (Table 18) read their bills. Yet, there were a number of billing error complaints on Tables 51 and 52.

Cost was a major complaint in the open-ended section (Tables 47 and 48) but only 22% of all respondents on Table 26 use universal lifeline.

Three-fourths of all respondents were unfamiliar with Blockers (Table 39), however, noting examples of privacy related suggestions, Blockers and Caller I.D. were suggested several times as ways to secure privacy.

FINDINGS - SUMMARY

Using averages, it could be suggested that respondents tended to be married females nearly forty years old, living in three to four member families, with annual incomes of $30,101 and paying monthly telephone bills of $68.15. Tables 1-8 (on demographics) and the discussions therein, shows the specific diversity of respondents representing the target population.

The following statements summarizes some of the major findings.

The respondents perception of "the telephone company" vis-a-vis "the telecommunications industry" is key to understanding the current telecommunications place. Judging from the responses in the open-ended section of the findings —in most respondents view—telecommunications services are provided by one entity. The "telephone company" is used as a euphemism for all telecommunications services—in some cases this includes long distances services. This may be due to the fact that most consumer receive their long distance bills and local calling services in one envelope.

Billing errors were a major concern. Toll calls were the focal point of the billing error complaints. However, there were complaints regarding long distance calls being charged—by unknown persons—to respondents bills. In such cases, the complaint was a lack of protection against illegal use of their telephone numbers.

Findings shows that respondent's satisfaction tended to stem from access to specific new telecommunications services—particularly call waiting. However, no mention was made regarding the cost of specific services. There was simply dissatisfaction with the cost of telephone services in general.

Chapter 4 Summary Conclusions & Recommendations contain a detailed analysis of data by way of conclusions.

CHAPTER IV

SUMMARY CONCLUSION, AND RECOMMENDATIONS

The purposes of this Chapter are to: 1) summarize the discussion of the Telecommunications marketplace, research design and major findings of this needs assessment; 2) to draw conclusions, based on findings of the assessment about the telecommunications education needs of the target population; and 3) to make recommendations for actions designed to meet—or at least alleviate—the needs identified in this study (Chapter V—Review of Literature on Needs Assessment has a seperate summary).

SUMMARY

As the review of literature (Chapter 2) indicates, the Telecommunications Industry has undergone a metamorphosis' since its inception over fifty years ago. Change was escalated with the advent of the divestiture process (breakup of Ma Bell) beginning in 1984. Many believe that the rapid changes in the telecommunication industry could result in an information rich/information poor society. This would be true, particularly, if the vast majority of telecommunications consumers are not mainstreamed—through education—into the information age.

Effective telecommunication education can close the information "gap" often resulting from socio-economics status, and/or a lack of access to information needed to make informed decisions. Effective telecommunications education can be accomplished by 1) identifying what is known and what information is needed in order to make rational decisions, 2) providing relevant information—via a telecommunications education curriculum—tailored for the specific audiences, and 3) determining the best method of disseminating or presenting the needed information.

Needs assessment is an acceptable strategy (Chapter 5) for identifying specific needs. Needs assessment might assist in determining the best methods and solutions feasible in meeting identified needs. With these and other considerations in mind, the writer designed and conducted a needs assessment study of telecommunications consumers in South Central, South East, and South West Los Angeles, with border areas of the cities of Inglewood and South Gate.

In this geographic area, resides predominantly low and moderate income Black and Hispanic families and individuals. Nearly fifteen hundred (1494) of these residents participated in the study.

The purposes of the study were to: 1) identify unmet telecommunications education needs of the target population stated above; 2) identify the level of sophistication of the average consumer— in the target areas—regarding usefulness or need of specific telecommunications products and services they now have, or hope to acquire and 3) identify the level of understanding of, and concerns with telecommunications issues and trends; and 4) present recommendations to consumer educators and interested telecommunications product and service providers.

FINDINGS

Although most of the surveys were distributed by community leaders—familiar to the respondents—and the origin and purposes of the survey were discussed with the respondents, some still believed that this was a phone company sponsored project.

Therefore, it may be important to note that there is a level of distrust at the mention of large public institutions. The local phone company is viewed such in the context of "public" by many in the communities involved in this study. In some instances when personal information is requested (even with the promise of anonymity) there respondents may be cautious in an attempt to protect themselves from perceived "collaboration" for large institutions.

Community consultants reported the following are examples of verbal interaction and conclusions drawn during the data collection process.

• Some respondents sought answers to telecommunications questions from the community consultants;

• Some expressed appreciation for the opportunity to express their views;

• Some considered the survey an "under cover operation" by the local telephone and long distance companies;

• Many respondents registered complaints verbally as well as written" i.e. "my cordless phone never works"; — "I have problems calling out on answering machines"; I had toll calls on my phone charged during the daytime when no one is at home—and numerous other personal experiences.

Generally, most respondents were pleased with the opportunity to register concerns and suggestions.

When asked about familiarity with enhanced services and new/controversial services:

Respondents tended to be:

- most familiar with call waiting, and
- moderately familiar with 900 numbers; cellular telephones, and telemarketing.
- least familiar with inside wire, TDD (for customers with hearing impairments), CRS (relay for hearing friends), Talking Yellow Pages, and such terms as Fiber Optics.

Services used by only a small percentage of respondents were:

- Call Forwarding, Conference Calls, Telephone Credit Cards, Inside Wire Repairs, and Voice Mail.

Respondents were most concerned about:

- The "break-up" of "Ma Bell", billing errors, cost of toll calls, cost of long distance calls, location of payment offices, and services provided at payment offices.

Bill inserts were selected as the "best source" of information, but read by less than half of the respondents.

CONCLUSIONS

From this summary of the findings, one can draw conclusions about the telecommunications education needs of consumer in the target area. These conclusions about needs can then serve as a basis for recommendations about how best consumer/community educators, the telecommunications industry, and community agencies might meet the identified needs.

In presenting conclusions, the writer shall also discuss certain contextual factors that may have influenced the responses of some participants, and shall point out where improvements have already been made or the issues are currently being addressed.

The following are examples of changes and discussions of change since the advert of this study:

Although, the average consumer may be unaware of the actions, CPUC is currently addressing the issues of billing errors, toll charges competition, and caller ID hearings have recently been held throughout the state.

Touch tone charges have been eliminated, and therefore consumers should have easier access to the touch tone equipment and services.

The local calling area has been expanded from eight to twelve miles.

CONCLUSIONS FROM ANALYSIS OF DATA

1) Many consumers do not see the personal benefit of the Ma Bell break-up or where certain telecommunications service responsibilities lie. There is a lack of understanding as to the "whys and hows" of the Ma Bell breakup.

2) A number of respondents uses the phrase "phone company" as a catch-all for all telecommunications services: Basic Service, Special Service, Equipment, Repairs, and Long Distances Services.

3) Terminology such as Fiber Optics—a driving force of the new telecommunications marketplace—is foreign to a vast majority of consumers.

4) A considerable number of telecommunications consumers do not use some of the enhanced services they have purchased. Many are unaware of certain services that were included in a "package" they purchased.

5) Average monthly bills of the target population are astronomical considering the geographic location and income of the subjects of this study.

6) Although they may qualify for the service, many consumers are unfamiliar with the option of Universal Lifeline.

7) The major form of communication to consumers, used by the telephone phone co., is bill inserts. Although over forty % of all respondents read bill insert, this still leaves a majority of telecommunications consumers in an informations void.

8) Consumers—in this study—are very concerned by the number of billing errors they experience. Only 62% of all respondents read their bills.

9) Many consumers are either unfamiliar with, or do not use several new or controversial telecommunications services, such as Inside Wire (and insurance), 900 numbers, and Cellular Phones.

10) Telecommunication Services for individuals and families with special needs - such as TDD, CRS, and Talking Yellow pages are not widely (or effectively) publicized to the population.

11) The public telephone system is considered unreliable and inadequate in the geographic location of this study.

12) In general monolingual Hispanic respondents are concerned about difficulties they have communicating with telephone operators.

13) Although there appears to be limited information and understand of the controversial issues surrounding Caller I.D. service, there was considerable interest in the feature. Some respondents viewed the Caller I.D. feature a possible deterrent to obscene and/or anonymous calls.

Summary of Conclusions

Some of the concerns were rhetorical—that is —the respondent may have needed an avenue for venting frustrations regarding a matter (s) or matter not easily remedied. In some instances, desired changes may not be economically feasible, either due to the magnitude of such changes (effecting all telecommunications users in the State) or because the costs of suggested changes might be astronomical for the local telephone companies. For instance, it is unlikely that free telecommunication services "for ten calls or less" could be provided by local telephone companies.

Although many businesses—including the telephone companies—make philanthropic contributions to various communities throughout the state, it is unlikely that the responsibilities for social services and education—as described/ suggested by some of the respondents— will be borne by the telecommunications industry.

Telecommunications education is (and can be) provided by industry, the public education community, and community consumer educators. The activities of these groups are ususally based upon mandates (by the CPUC or Legislators) or by funding such as that currently sponsored by CPUC through the Telecommunications Education Trust.

The recommendations that follow, then, must be viewed in the context of these limitations.

RECOMMENDATIONS

On the basis of conclusions reported above, the following recommendations are offered:

1. Equipment:
—Rotary phone should be exchanged for Touch Tone equipment at no cost to consumers. This would benefit the telephone company and business by providing universal access to new telecommunications products and services.

2. Sources of Information:
—In addition to bill inserts, the phone companies should use more Public Service Announcements, Churches and Community Services Agencies to report changes in services, clarify telecommunications issues and announce rate increase hearings.

3. Enhanced Services:
—Explain in detail how to use services such as call waiting, conference calling, etc. before installation of services.

—After verbal explanation—of how to use new products and services purchased—sales representative, followup with handy instructions card(s) in appropriate languages;

— The phone companies should periodically survey "level of use" of the enhanced services, and inform customers of findings. This information would enable consumers to rethink their telecommunication services and purchase those services more compatible with their lifestyles. For instance, if one service (such as Call Waiting) is the only one used in a package—during the course of one year—a customer may choose to eliminate the other services in the package. This procedure might reduce the danger of having basic service terminated due to the cost of less essential services.

4. New or Controversial Services:
—Develop a telecommunications education curriculum which enlightens average consumers in the areas of new terminology and technology which may inpact their lives.

5. Services to meet Special Needs:
—Work with Senior Citizen Organizations and Centers to disseminate information regarding special products for the handicapped/disabled;

6. Cost:
—Disseminate informations announcing Public Hearing—regarding proposed rate increases or other changes in a timely manner, in a variety of ways—to reach all telecommunications users i.e. local newspaper, Public Service Announcement (PSA), community agencies.

7. Billing:
—Periodic, random review of customers bills should be made to check for "accuracy in billing". A company policy to this type could reduce the number of billing errors reported by customers.

8. Privacy:
—In the event that Caller I.D. becomes a widely used service, consumers should be informed of all ramifications before purchasing the service I.E. access to one's number may be obtained when calls are made.

9. Service:
There should be a vigorous advertising campaign to inform Hispanic customers of the Hispanic Service Centers presently operating in the various communities.

Additionally, a Language Line program (such as the one currently operated by AT&T) should be offered by local telephone companies to accommodate the diversity of languages and cultures of telecommunications customers in the State of California.

10. "Information Age"
—There is a logical nexus between computer literacy and the "Information Age". A partnership between the telecommunications industry and public education institutions could serve to prompt computer literacy in all communities.

RECOMMENDATION FOR FUTURE USE

A three year follow-up study should be planned for the purpose of determining whether the needs identified in this study have, in fact, been met or alleviated during the three year period.

CHAPTER V

REVIEW OF LITERATURE

In this chapter the literature relevant to this study is reviewed under three headings: 1) the rationale for needs assessment; 2) concepts of needs assessment and Environmental Scan; and 3) Utilization of Information Obtained. The chapter concludes with a summary.

Rationale for Needs Assessment

Initially, an answer was sought to the following question. Is community needs assessment a useful process.

Literature reveals that information obtained from the results of a needs assessment can aid in the development of useful written materials for consumers of various products and services; while providing insights as to best strategies for providing consumer education to a specific target population.

Concepts of Needs Assessment

Terminology is often an issue in defining needs assessment. According to Kimpston and Stockton " a common and useful meaning of the term need suggest a gap or discrepancy between two indices—a desired condition and the status quo. Placed in order to priority, needs may serve as a basis for educational planning" [2]

According to Ahmann (1979)

> "A major criticism of the discrepancy definition is that it requires knowing what the ideal state is to determine a need, and further requires that this state is a stable target toward which educators strive. There is confusion about the difference between needs and wants. Our wants are well known to us, but the satisfaction of them may not be proper goals. In contrast, we are not always aware of our needs, but the satisfaction of them may be vital to our welfare. A need ends and a want begins when a satisfactory condition has been reached. Therefore, a need may be the gap between "what is" and "what isn't satisfactory" rather than "what ought to be". [3]

Addressing the issue of "concerns" is also important in the needs assessment process. Trimby made a distinction between concerns and validated needs:

"People have many concerns which are not supported by facts and, hence, are not "needs". The "assessment" part of needs assessment is the process of collecting the data to change an expressed concern into a validated need. These are then ranked according to pre-determined criteria. To them a "concern" is a hypothesis or belief that there is a difference between existing and desired conditions. It is through the needs assessment process that this hypothesis is validated or refuted. [4]

Environmental Scan

Most planners agree that demographic information regarding the target population must be available and must be utilized in designing and conducting any type of need assessment.

Morrison reports:

> "A technique has been developed in the corporate world to systematically gather and evaluate information from the external environment ... the environmental scanning process... a kind of radar to scan the world systematically and signal the new, the unexpected, the major and the minor; ..systematic collection of external information in order to (1) lessen the randomness of information flowing into an organization and (2) provide early warnings for managers of changing external conditions. [5]

As one author states:

> " The purpose in developing a community profile is to establish a clear record of existing conditions and to analyze those conditions as to their effect on the proposed program. This effort is usually conducted through the development and utilization of survey instruments and personal contacts with all existing local sources so that adequate information may be obtained". (conference materials) [6]

Lomax describes Environmental Scanning in part as "...anticipating events that might differ from the economic, social, and political conditions of the present"... citing the benefits of the process offered by Renfro and Morrison who suggested that Environmental Scanning "allows an organization to...identify important emerging issues that may constitute either threats or opportunities to change and regulatory development". [7]

Exploring views on and data from Environmental Scans gives the Needs Assessment process a clearer focus.

In the process of utilizing the data collected from such studies one might draw inferences in conducting effective needs assessments. Such as in the case of this study. Present circumstances and future trends in areas such as education, socialpolicy, economic conditions, and employment/unemployment trends were useful in identifying the target population for this study.

There is a population of consumers that are not in the mainstream of the various educational environments....the "out of school population".

Miller, with consideration of a host of variables, shows that there is a positive correlation between income and education. [8]

Still, other studies revealed that educated people in general seek more education than those at a lower level, and that they have the motivation and information networks to take advantage of educational opportunities. The disadvantage and the poorly educated, on the other hand, are less likely to be reached, to the disappointment of many educators.

Community and continuing education providers conduct needs assessments in order to identify and address their specific needs.

Researchers and educators also use this type of data along with community development (or deterioration) trends to identify needs and implement programs to impact change.

Utilization of Information Obtained Through Needs Assessment

A particularly important aspect of the decision-making process is the use of information derived from needs assessment. As Bower stated: " While there is no doubt that the judgement of the decision maker is essential, that good judgement can be supplemented by relevant, accurate and timely information. " [9]

A major complaint regarding needs assessment, is failure to utilize the date collected.

Phillips made the following observations:

> "Communities over the centuries have been left to evolve at their own rate of speed with whatever imbalances develop; depleting whatever resources are available by anyone who has the whim to do so; letting shortages and gaps lay dormant or expand." [10]

Phillips view is that when results of research are worth while, often the information is shelved rather than used by planners. [11]

Cross concurs, "In general, a needs assessment that sets out to solve a problem will be far easier to implement that a needs assessment that sets out to find a problem." [12]

Successful implementation of programs designed to meet community education needs also depends on receptivity to new ideas by both the educator and those who will be educated.

SUMMARY

Rationale for Needs Assessment

Clearly, there is a need for improved consumer education. In the telecommunications marketplace, where change over the past few years has been rapid, a challenge is posed for consumer educators and industry to provide relevant information. Needs assessment can assist in determining what it is that consumers need to know in order to make informed decisions—for the purposes of this study—in the telecommunications marketplace.

It is this writer's view that business should adopt the concept of identifying and meeting needs—similar to those described in the Mission and Goals statement of educational institutions and that educational institutions should adopt the "satisfied customer" policy of many in the business field.

Concepts of Needs Assessments

Concepts of needs assessment vary greatly by definition as well as technique. A need is generally defined as a disparity between what is presently available and what is desired. Among the techniques commonly used to conduct needs assessments are: survey questionnaires (administered in person to groups and/or implemented through the mail); face-to-face interviews and the use of diverse advisory committees (or groups organized to brainstorm).

Environment Scan

Environmental scan provides a global view of specific conditions in defining a target population. A profile of the target population indicating economic status, educational level, social conditions, and possible future trends is a sound foundations for developing needs assessment instruments tailored to identify specific needs.

Utilization of Information Obtained from a Needs Assessment

The literature reports that, on occasion, educators fail to use data collected through needs assessment. Still others note that the collection of data may not lead to the alleviation of unmet needs.

However, very often curriculum planners for community and continuing education as well as industries determined to communicate effectively with consumers, use data collected in needs assessments.

There is an abundance of literature on needs assessments. The literature used in this study was selected to provide a background for this study. Additionally, the literature provided information helpful in developing the instrument and methodology used in assessing telecommunications needs of the population used in this study.

List of Footnotes

1) Herbert E. Philips, "Needs Assessment: Importance in Planning, Present Status and Needs Assessment and Long-Range Planning", paper presented at the Convention of Southern Association of Community and Junior Colleges, Atlanta, Georgis, December 9, 1975.

2) Richard D. Kimpston and William S. Stockton, "Needs Assessment: A Problem of Priorities", *Educational Technology*, June 1979, p.i.

3) J. Stanley Ahmann, "Needs Assessment for Program Planning in Vocational Education", Information Series No. 154 (Columbus, Ohio: National Center for Research in Vocational Education, 1979). p.3

4) Madeline Trimby, "Needs Assessment Models: A Companison , *Education Technology*, December, 1979, p.24

5) James L. Morrison, "Developing A Comprehensive Environmental Scanning System: A Case Study". Toronto, Ontario, July 31 - August 3, 1988.

6) Child Development conference materials. Los Angeles, California. 1984 (author unknown).

7) Lynn Lomax, "Environmental Scanning Project: A Dimentional Aspect of Needs Assessment in the Strategic Planning Process. Lane Community College, Eugene Oregon. Fall 1987, p.4

8) Roger L. Miller. Economic Issues for Consumers. 6th ed. (West Publishing Co. 1990) p.138

9) Ellen Bowers, *Occupational Education Information: Needs and Governance Patterns in Selected California Community Colleges.* (Sacramento: Office of the Chancellor. 1975) p.18

10) Phillips, p.6

11) Ibid. p.6

12) Patricia K. Cross, "The State of the Art in Needs Assessments", paper presented at the Conference on Lifelong Learning, Akron, Ohio, April 27, 1979. p.18

APPENDIX A.

Survey Instrument

TELECOMMUNICATIONS ASSESSMENT AND EDUCATION PROJECT
NEEDS ASSESSMENT SURVEY

Thank you in advance for your participation. Answers to questions on this survey will provide information regarding your level of satisfaction with present telephone services and products, knowledge of available services and products and use of presently owned services and products.

The results of this survey will be used to develop telecommunications education forums and news bulletins. The forums will be held in the Southern part of Los Angeles. The education bulletins will be distributed throughout the same area.

PRESENT TELEPHONE SERVICES

Indicate which applies to you (Circle one) Rent Phone Own Phone Both

Number of telephones in your home _____

Number of different telephone numbers in your home _____

Estimate your average monthly phone bill $_____

Indicate which service(s) you have by checking all that apply:

CALL WAITING	☐	TOUCH TONE PHONE	☐
CALL FORWARDING	☐	ROTARY PHONE	☐
CONFERENCE CALL	☐	INSIDE WIRE INSURANCE	☐
TDD (For Deaf Customers)	☐	CRS (Relay for Hearing Friends)	☐

Indicate your level of use of the following by circling the appropriate word:

Call waiting	**often**	**seldom**	**never**	**do not have**
Call forwarding	**often**	**seldom**	**never**	**do not have**
Conference calls	**often**	**seldom**	**never**	**do not have**
Inside wire repair	**often**	**seldom**	**never**	**do not have**

If you have acquired any of the above services, please indicate by checking the box how service was acquired:

Called for new basic service and sold special package	☐
Received call from service representative	☐
Service sold when calling for repair	☐
Heard about the service and called the phone company	☐

TELEPHONE COMPANY INFORMATION AND SERVICE

(Please circle your response)

How convenient is the phone company payment center to your home?	Convenient	Inconvenient	
Would you prefer to purchase a single product service as opposed to a package?	Yes	No	
Do you use universal lifeline services?	Yes	No	
Do you read/review your bill carefully each month?	Yes	No	Sometimes
Do you read bill inserts/announcements?	Yes	No	Sometimes
Do you use phone credit cards?	Yes	No	Sometimes
If you wanted information regarding phone company service which is the best source for you?	TV	Radio	Bill Insert
	Flyer	Local Newspaper	Other

— OVER —

NEW PRODUCTS/SERVICES/TELECOMMUNICATIONS TERMS

Which of the following are familiar to you (check all that apply)

- ☐ Cellular Phone
- ☐ Fiber Optics
- ☐ Telemarketing
- ☐ Inside Wire
- ☐ 900 Numbers
- ☐ Voice mail
- ☐ Blockers
- ☐ Talking Yellow Pages

If you have major concerns with the phone company please describe (use space provided):

What type of service would you like offered by the phone company?

Demographic Information (Name not needed)
Write in blank space or circle where appropriate.

Age _____

Gender: Male Female

Marital status: Single Married Single Parent Divorced

Estimated total annual family income $_____

Number of persons in your family _____

EVALUACION DE TELECOMUNICACIONES Y PROYECTO DE EDUCACION
ENCUESTA Y EVALUACION DE NECESIDADES

Gracias de antemano por su participación. Las respuestas en esta encuesta proveerán información tocante a su nivel de satisfacción con los actuales servicios y productos telefónicos; conocimiento de servicios y productos disponibles y el uso de los servicios y productos que se poseen actualmente.

Los resultados de esta encuesta serán usados para desarrollar foros de educación de las telecomunicaciones y boletines de información. Los foros se efectuarán en la parte Sureste de Los Angeles y los boletines educativos serán distribuidos a través de esa misma area.

SERVICIOS TELEFONICOS ACTUALES

Indique cuál aplica a Ud. (Circule uno) Teléfono Rentado Propio Los dos

¿Cuántos teléfonos hay en su casa? _____

¿Cuántos números telefónicos diferentes hay en su casa? _____

Estime su promedio de la factura mensual de su teléfono $ _____

Indique qué servicios tiene Ud. Marque todo lo que aplica:

LLAMADA EN ESPERA	☐	TELEFONO DE TONO SUAVE	☐
ADELANTANDO LA LLAMADA	☐	TELEFONO DE ROTACION	☐
LLAMADA EN CONFERENCIA	☐	SEGURO DE ALAMBRADO INTERIOR	☐
TDD (Para Clientes Sordos)	☐	CRS (Relevo para Amigos Oyentes)	☐

Indique su nivel de uso de lo siguiente, circule la palabra apropiada:

LLamada en espera	Seguido	Raramente	Nunca	No se tiene
Adelanto de llamada	Seguido	Raramente	Nunca	No se tiene
Llamada en conferencia	Seguido	Raramente	Nunca	No se tiene
Rep. de alambre interno	Seguido	Raramente	Nunca	No se tiene

Si Ud. ha adquirido alguno de los servicios arriba mencionados, por favor marque una casilla y diga cómo adquirió este servicio:

Llamó por un servicio básico nuevo y le fue vendido un paquete especial ☐

Recibió llamada de un representante del servicio ☐

El servicio le fué vendido cuando solicitó una reparación ☐

Escuchó acerca del servicio y llamó a la compañía de teléfonos ☐

INFORMACION Y SERVICIO DE LA COMPAÑIA TELEFONICA
(Por favor circule su respuesta)

¿Qué tan conveniente es el centro de pagos de la compañía telefónica en relación a su hogar? Conveniente Inconveniente

¿Prefiere Ud. comprar un producto o servicio simplemente en comparación a comprar en paquete? Si No

¿Usa usted el servicio residencial de descuento? Si No

¿Lee Ud. y revisa su factura con cuidado cada mes? Si No Algunas veces

¿Lee Ud. los anuncios que se adjuntan a su factura? Si No Algunas veces

¿Usa Ud. tarjetas de crédito para su teléfono? Si No Algunas veces

¿Si usted quisiera información tocante al servicio de la compañía de teléfono, cuál es su mejor fuente? TV Radio Factura Periódico Volantes Otro

PRODUCTOS NUEVOS/SERVICIOS/TERMINOS EN TELECOMUNICACIONES

De lo siguiente qué es familiar para Ud.? (Marque todo lo que aplica)

- ☐ Teléfono Celular
- ☐ Fibras Opticas
- ☐ Mercado telefónico
- ☐ Alambrado Interior
- ☐ Números Serie 900
- ☐ Correo vocal
- ☐ Bloqueos
- ☐ Páginas Amarillas

Si usted tiene mayores preocupaciones acerca de la compañía de teléfono por favor describa (use el espacio que se provee):

¿Qué tipo de servicio le gustaría que le ofreciera la compañía de teléfono?

Información Demográfica (Su nombre no es necesario)
Escriba en los espacio o circule donde sea apropiado.

Edad _____

Género: Masculino Femenino

Estado marital: Soltero/a Casado/a Padre-Madre Soltero/a Divorciado/a

Estimación total del ingreso económico familiar al año $ _____

Número de personas en la familia _____

APPENDIX B.

Definition of Terms

NEEDS ASSESSMENT:

Needs Assessment. A survey of what exist compared to expressed desires of what should exist.

Environmental Scan. "..identifies national planning assumptions based on social; economic; regional and political conditions; technological changes; and pattens of charitable giving among individuals and corporations." Catonville 1989.

Survey Questionnaire. The means by which data were collected from consumers regarding their perceptions and opinions of needs and of current products and services.

Community. A social group liked by common interest.

TELECOMMUNICATIONS:

Telecommunications. (derived from the Greek term "tele' meaning far-off) —carried out with the aid of electronic equipment such as the radio, telegraph, telephone and television. The information that is being transmitted can be in the form of voice, symbols, pictures, or a combination of these. V. Alisonkas, et .al .1988.

Intelligent Network. "Information Age Vision" in which "The Goal is simple - to bring Information Age services and benefits within easy reach of everyone already served by the local telephone companies by offering services, and through lowering barriers to participation and use for thousands of providers and millions of potential customers." Pacific Bell 1988.

Cornupocia. abundance

Telemarketing. Telephone solicitation/ Sales—usually made from a purchased list.

Universal Lifeline. A reduced rate for basic services. One half of the basic rate is charged for unlimited calls (less than $5.00 monthly) or for a limited number of calls, a basic service cost of less than $3.00 monthly. Eligibility is based upon family income and size. The service is provided on the basis of a customers declaration of eligibility.

Commstar. Custom Calling Services packages which includes, Call Forwarding, Call Waiting, Conference Calls, Quick Dial, etc .

Inside Wiring. A new "phenomena" since divertiture which requires telecommunications customers to except responsibility for wiring telephone wires within the walls of their homes.

APPENDIX C.

Census Data for Target Population

CITYWIDE HOUSING/POPULATION FACTORS

	TOTAL PERSONS	<< PERSONS NOT IN POVERTY >>				<< PERSONS IN POVERTY >>			
		UNDER 55	55-59	60-64	OVER 64	UNDER 55	55-59	60-64	OVER 64
NORTHEAST LOS ANGELES	198229	67.5	3.9	3.1	8.5	15.3	0.4	0.3	1.8
BOYLE HEIGHTS	81279	68.3	2.9	2.5	6.5	25.6	0.6	0.4	1.3
SOUTHEAST LOS ANGELES	186984	49.2	2.9	2.6	7.2	34.3	1.8	0.9	2.0
WEST ADAMS-BALDWIN HILLS-LEIMERT PARK	151528	64.3	4.7	4.0	8.8	15.9	0.6	0.5	1.3
SOUTH CENTRAL	228969	58.4	3.7	2.9	6.9	25.8	0.9	0.7	1.5
WILSHIRE	225406	58.8	4.5	4.3	15.2	14.2	0.5	0.6	1.9
HOLLYWOOD	188996	61.8	4.8	4.1	12.6	15.8	0.6	0.5	1.5
SILVERLAKE-ECHO PARK	76650	63.9	3.9	3.2	8.9	17.8	0.6	0.5	1.3
WESTLAKE	92414	56.8	3.1	2.6	7.7	26.9	0.7	0.8	1.5
CENTRAL CITY	22829	48.1	4.5	3.3	9.1	35.8	2.7	1.5	3.8
NOE CENTRAL CITY	12851	44.6	3.3	2.7	6.9	35.6	0.8	1.6	4.4
-----METROPOLITAN LOS ANGELES---------	1458135	59.4	3.9	3.3	9.6	20.9	0.7	0.6	1.6
SHERMAN OAKS-STUDIO CITY	66183	64.7	7.8	5.7	15.1	5.8	0.3	0.4	1.0
NORTH HOLLYWOOD	92794	67.1	5.3	4.4	11.1	10.1	0.5	0.4	1.1
ARLETA-PACOIMA	69077	73.4	3.7	2.8	4.6	14.1	0.4	0.3	0.6
VAN NUYS-NORTH SHERMAN OAKS	109511	68.2	5.6	4.7	10.6	9.6	0.3	0.3	0.7
MISSION HILLS-PANORAMA CITY-SEPULVEDA	75948	73.3	5.8	4.5	7.6	7.5	0.3	0.2	0.7
SUN VALLEY	61158	73.3	5.3	4.2	6.3	9.8	0.2	0.3	0.5
SYLMAR	42375	77.5	4.5	3.4	5.2	8.5	0.3	0.2	0.4
GRANADA HILLS-KNOLLWOOD	55886	79.6	5.8	4.8	5.2	4.7	0.2	0.2	0.3
CANOGA PARK-WINNETKA-WOODLAND HILLS	134495	77.8	6.2	3.8	6.3	4.9	0.2	0.2	0.5
CHATSWORTH-PORTER RANCH	67899	81.5	5.8	3.4	5.8	4.4	0.2	0.2	0.2
NORTHRIDGE	53873	77.3	6.2	4.1	5.3	6.6	0.1	0.2	0.3
RESEDA	77835	73.6	6.1	4.3	7.6	7.0	0.3	0.3	0.8
ENCINO-TARZANA	66852	72.8	7.2	5.8	9.6	5.1	0.2	0.2	0.6
SUNLAND-TUJUNGA	44279	75.8	5.8	3.9	7.7	7.2	0.2	0.3	0.7
-------SAN FERNANDO VALLEY----------	1017365	73.5	5.7	4.2	7.9	7.5	0.3	0.3	0.6
WESTWOOD	34534	59.8	6.3	5.5	15.5	12.4	0.2	0.1	0.8
WEST LOS ANGELES	62747	62.8	6.1	5.8	15.7	8.5	0.2	0.3	0.8
PALMS-MAR VISTA-DEL REY	94964	71.9	5.1	4.5	8.4	9.8	0.2	0.2	0.6
VENICE	36553	70.3	4.8	2.8	7.5	14.8	0.4	0.3	0.7
WESTCHESTER-PLAYA DEL REY	43743	69.6	7.6	6.1	9.6	6.2	0.2	0.2	0.6
BRENTWOOD-PACIFIC PALISADES	53596	69.8	7.3	5.5	11.7	5.6	0.2	0.2	0.6
BEL AIR-BEVERLY CREST	20201	70.3	8.2	6.7	10.8	4.3	0.1	0.1	0.3
----------WESTSIDE----------	346338	68.1	6.1	5.1	11.8	8.5	0.2	0.2	0.7
WILMINGTON-HARBOR CITY	68438	72.6	4.3	3.1	6.2	12.7	0.4	0.3	0.5
SAN PEDRO	62336	66.1	5.1	4.4	10.8	11.6	0.4	0.5	1.1
TORRANCE-GARDENA	30238	72.5	4.5	3.8	5.5	13.3	0.5	0.3	0.5
---------SOUTHBAY-HARBOR----------	153012	70.8	4.7	3.6	7.9	12.4	0.4	0.4	0.7
CITYWIDE TOTALS	2966850	65.8	4.8	3.8	9.1	14.4	0.5	0.4	1.1

1980 U.S. CENSUS OF POPULATION -- SIMPLE DATA

** LA COUNTY MEDIAN HOUSEHOLD INCOME(17,563)

CITYWIDE HOUSING/POPULATION FACTORS

	TOTAL PERSONS	HOUSEHOLDS TOTAL	HOUSEHOLDS W/CHILD	HOUSEHOLDS NO/CHILD	PERSONS/	HOUSEHOLD INCOME MEAN	HOUSEHOLDS < $20K	HOUSEHOLDS $20=>$50K	HOUSEHOLDS => $50K
NORTHEAST LOS ANGELES	198229	64186	25708	38478	3.09	17616	37733	26453	1881
BOYLE HEIGHTS	81279	21644	11058	10586	3.76	13255	16027	5617	192
SOUTHEAST LOS ANGELES	186984	57973	25718	32255	3.23	10655	47632	10341	299
WEST ADAMS-BALDWIN HILLS-LEIMERT PARK	151528	61583	20229	41354	2.46	16037	39487	22096	1285
SOUTH CENTRAL	228969	74818	29309	44701	2.99	12826	55102	18908	691
WILSHIRE	225486	105167	21453	83714	2.14	17815	67252	37915	5133
HOLLYWOOD	180996	87846	15389	72457	2.06	20234	56894	31752	6645
SILVERLAKE-ECHO PARK	76658	27879	8876	19003	2.75	17689	17498	10381	1884
WESTLAKE	92414	35357	10357	25000	2.61	11158	28693	6664	269
CENTRAL CITY	22829	8725	858	7875	2.62	9815	7784	1021	142
R&E CENTRAL CITY	12851	1912	805	1107	6.72	10804	1579	333	24
------METROPOLITAN LOS ANGELES--------									
	1458135	546282	169752	376530	2.65	15761	374881	171481	17581
SHERMAN OAKS-STUDIO CITY	66183	33586	5469	28037	1.98	32015	14215	19291	5633
NORTH HOLLYWOOD	92794	48837	18455	30382	2.27	19517	23121	17716	1913
ARLETA-PACOIMA	69077	17578	9476	8102	3.93	20152	8172	9406	457
VAN NUYS-NORTH SHERMAN OAKS	109511	48693	11549	37144	2.25	21292	25168	23525	3102
MISSION HILLS-PANORAMA CITY-SEPULVEDA	75948	28398	9520	18878	2.67	22065	12667	15727	1388
SUN VALLEY	61158	20053	8156	11897	3.05	22860	8423	11630	1811
SYLMAR	42375	12750	5978	6788	3.32	24851	4768	7982	818
GRANADA HILLS-KNOLLWOOD	55888	18675	7807	10868	2.99	29688	5131	13544	2185
CANOGA PARK-WINNETKA-WOODLAND HILLS	134495	48059	17715	30344	2.80	29931	14957	33102	6383
CHATSWORTH-PORTER RANCH	67899	23546	9834	13712	2.88	32496	6733	16807	3923
NORTHRIDGE	53873	18468	6848	11620	2.92	32508	5686	12782	3184
RESEDA	77835	30107	9291	20816	2.56	22289	12855	17252	1455
ENCINO-TARZANA	66852	26650	7901	18749	2.51	39475	8599	18051	6593
SUNLAND-TUJUNGA	44279	15718	6057	9661	2.82	24035	6210	9508	1037
--------SAN FERNANDO VALLEY----------									
	1017365	383038	126848	256990	2.66	26392	156785	226325	39802
WESTWOOD	34534	15137	1713	13424	2.28	36506	6230	8907	3280
WEST LOS ANGELES	62747	31152	4949	26203	2.01	25999	14738	16414	3498
PALMS-MAR VISTA-DEL REY	94964	42182	9701	32481	2.25	21577	20982	21200	2523
VENICE	36553	17146	3327	13819	2.13	21468	9733	7413	1392
WESTCHESTER-PLAYA DEL REY	43743	18362	4269	14093	2.38	28031	5994	12368	1961
BRENTWOOD-PACIFIC PALISADES	53596	23056	5599	17457	2.32	48351	6315	16741	7136
BEL AIR-BEVERLY CREST	20201	7887	2245	5642	2.56	80220	1188	6787	4250
-------------WESTSIDE----------------									
	346338	154922	31803	123119	2.24	31647	65092	89830	23958
WILMINGTON-HARBOR CITY	68438	19432	8693	10739	3.11	20620	9633	9796	774
SAN PEDRO	62336	23915	7798	16117	2.61	19729	12699	11216	1888
TORRANCE-GARDENA	30238	9680	4138	5542	3.12	20712	4689	4991	418
----------SOUTHBAY-HARBOR------------									
	153012	53027	20629	32398	2.89	20235	27021	26003	2272
CITYWIDE TOTALS	2966850	1137269	348232	789037	2.61	21714	623619	513637	82813

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